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ART. I.—*A Memoir on Obliteration of the Bronchiæ: By* A. C. REYNAUD, M. D., formerly resident in the Hospital; late Chief of Clinical Medicine of the Paris Faculty; Physician at Puy, &c. Translated for the Western Journal of Medicine and Surgery: By JOHN A. WARDER, M. D., of Cincinnati.

(CONCLUDED.)

State of the neighboring Bloodvessels.

The bloodvessels were not found closed, except where an extreme dilatation of the bronchiæ had preceded their obliteration: by insufflation, indeed, we were able to follow them as great a distance as in a sound lung, but this was not the case with the vessels that accompany the terminal fibrinous branches of the obliterated bronchiæ; air could not be forced into them, and the absence of circulation was indicated by their black color and hair-like appearance. It may be here mentioned, that the filaments of the obliterated bronchiæ, as well as their terminal enlargements, were generally of a

dark, black color,—which may be owing to the discoloration of the solid particles of blood after the circulation has ceased, and is the same observed in so many chronic alterations of the lungs, especially at their summit.

Our researches have not been directed to the nerves and absorbents of the lungs, in these cases; for their exceeding delicacy prevents our following their branches distinctly, into the altered parts of the organ.

State of the Cellular Tissue.

A remarkable appearance was observed where the last filaments of an obliterated bronchia terminated: as elsewhere, when parts become atrophied or diminished in volume, this tissue tends to occupy their place, so here it keeps apart the bronchial ramifications, which, when distended with air, constituted the whole pulmonary fabric. Thus the various elements of the primitive structure of the organ, may be very distinctly observed, not merely from their peculiar form and isolation, but also by their black color, which contrasts strongly with the greyish hue of the cellular tissue. This substance was also much softer than other parts, and drawing slightly upon one of the trunks of the terminal filaments, we perceived a number of furrows, caused by the pressure on an unresisting substance, like those seen in dissecting the final ramifications of the nerves, when the eye has lost sight of them, they are again brought into view by exerting a slight traction on their trunks. As it was more readily torn than the fibrous threads, the cellular tissue could be easily removed by scraping with the handle of the scalpel, while the ultimate bronchial and vascular filaments were so exposed that they could be seen floating under water, or in the current of air from a small blow-pipe.

Causes of Obliteration.

With our views of the physiological properties of the mucous membranes, and their slight tendency to form adhesions, we are surprised to find the bronchiæ so often obliterated: indeed, we may suppose that their lining membrane, and especially that part of it which performs the physiological act of respiration, differs from the other mucous membranes, as it is much thinner and more pellucid than the layer which lines the commencement of the air passages, and the digestive tubes: mere continuity does not appear to me sufficient proof of an identity of character.

In the smaller bronchiæ we find neither villosities nor follicles, and their natural secretion is serous, not mucous. We know that certain pathological conditions, such as continued inflammation, will develope the structure of mucous membranes, and that products, analagous to those of mucous surfaces, are frequently observed: but, the pathological condition has great power of transformation—a serous cyst, whose natural function was to secrete an aqueous fluid, may be converted into a mucous cavity capable of secreting mucous, or pus; and in the same manner all the organs, with any given organization, may give rise to tissues or organic products of different characters.

Besides, the lining membranes of the air passages is much more frequently affected with adhesive inflammation than the ordinary mucous tissues; and I have reason to believe that the bronchial extremities are frequently in an analagous condition. I have found many cases of acute pneumonia with hepatization, where the inflammation had resulted in false membranes in all the lesser bronchiæ, filling their cavities

more or less completely, and leaving the surrounding parts untouched.

If to these data, based upon the pathological characters which belong especially to the serous membranes and the internal coats of vessels, we add the fact of the frequent obliterations of bronchiæ, of vessels of serous cavities, we shall have some reason to suppose that among these several parts, there is as complete an identity as their various functions will admit. If this analogy be well founded, we may conclude, *a priori*, that inflammation of the bronchiæ, especially the small ones, may cause their obliteration in the same way that a blood vessel is occluded by a corresponding attack of inflammation:—the following fact will place this obliterating influence of inflammation beyond a doubt:

A man aged about twenty-five, was attacked with small-pox; the eruption had run its ordinary course, the scabs were detached, leaving scars on the face, when a pneumo-thorax of the right lung ensued. Its presence was indicated during life, by extreme dyspnœa, a remarkable dilatation of the affected side, and a greater ressonance than natural. The patient was much emaciated and had a cough, but M. C. A. Louis did not suspect the presence of phthisis except from the perforation of the pleura. The patient soon died suddenly; a considerable amount of air was found in the right pulmonary cavity, the lung was pressed closely against the vertebral column and retained there by soft, recent false membranes: a perforation of the pleura, leading to a collection of pus, existed at the base of the organ. There were many enlargements on the surface, and a number of little tumous were perceptible on the touch, conveying the sensation transmitted by a lung impacted with tuburcles: indeed tumours were found within the organ, but though apparently tuburcu-

ar, they had an unusual aspect. A careful dissection of the small bronchiæ showed them to be very red, further along their surface was covered with a slight layer of lymph, and beyond this, their cavity was filled with the same matter, up to their final terminations which appeared granulated. The accompanying blood vessels were black as charcoal, while the pulmonary parenchyma appeared, up to the limits of the alteration, of a marked reddish brown. Neither induration nor the semi-transparent grey infiltration were observed. At the same time, little cavities filled with pus, existed throughout the organ, as numerous at the base as at the superior portion. At the summit, one of these cavities was larger than the rest, and filled with what appeared laudable pus—it was lined with a yellowish white membrane half a line thick, separating it from the lung which was of a reddish brown for half a line, beyond which it was of the natural rosy hue and entirely exempt from tuburcles. A bronchia of considerable size, larger than natural, thickened and of a bright red, ran towards this cavity, but did not enter it; indeed the membrane above mentioned, extended into the tube for six or seven lines, forming a firm layer that was readily detached from the bronchial membrane. This plastic matter had the same characters as that contained in the little bronchiæ, which, by their union, formed the tuburculous looking masses which we had observed. I shall not here insist upon the difference between this lung and those affected with tuburcle; suffice it to say, it was striking, though, without a careful examination, the distinctive characters could not be precisely defined.

The purulent sac appeared to be nothing more than an abscess: the matter in it was true pus, perfectly thickened, destitute of tuburculous clots or detritus. The soft, white, un-

organized substance which lined the cavity, was precisely like that found in an abscess in the parenchyma of an organ: neither induration, tuburcular granulations, nor the semi-transparent grey infiltration were found around it—a red inflammatory circle was all that separated the sound from the diseased portions. Finally, the prolongation of this false membrane into the bronchiæ, manifestly inflamed, but not ulcerated, conclusively demonstrated both its characters and nature.

Had the patient survived, what would have become of this abscess? Would the pus have found exit; would the oblit erated bronchiæ have been rendered permeable by the absorption of the plastic matter; or would the obstruction have remained permanent, and the abscess have become encysted? I shall not here discuss these questions, as the case was merely introduced to prove that obliteration may occur from false membranes, produced by evident inflammatory action.

It will be readily conceived that the bronchiæ should be obliterated when the circulation of air is obstructed, as is observed in an artery from which the blood has been excluded. But in the arrangement of the bronchiæ there is no anastomosing between the branches, so that where an obstacle exists, all the further portion of the tube must become impermeable: this cessation of the influx and efflux of air, which constitutes the circulation in the bronchiæ, may be followed by the entire absorption of the air contained at the moment of obliteration, when the shrinking of the walls upon themselves with consequent adhesion, aided by pressure of the surrounded parts, will ensue. That the air contained in a lung may be thus absorbed, after its escape is prevented, will be incontestibly proved by a fact to be mentioned in this memoir; though we do not consider it demonstrated that the

obliteration of several branches will result from an obstruction at first limited to a point in the trunk whence they arise. Hoping to throw some light upon this difficult point we shall cite the following case, which is, besides, a remarkable form of the lesion. In the body of a female who died under the care of M. Louis at La Pitiè, I found one of the lungs presented these characters: The principal bronchiæ of the superior lobe, five lines in diameter, was obliterated a little more than two inches from its origin; instead of being a solid cord beyond the obliteration, it was dilated into an oval sac and filled with a semi-fluid, yellowish white substance somewhat like tuberculous matter mixed with mucous. At some distance, the subdivisions were obliterated a few lines from their origin, and degenerated into fibrous cords that were again divided into solid threads terminating near the pleura.

Below the obliteration of this bronchia, we could nowhere see any of the little orifices leading into the secondary branches, but in their stead were imperforate circular depressions. From the exterior surface, at all the corresponding points, solid fibrous cords could be traced far into the substance of the lung. Two of these cicatrices only could be perforated by a pin; the higher of these opened into a fusiform portion of a bronchia about twelve lines long, and four in diameter at its largest part. From its extremity started three little ramifications, which were soon obliterated. This cavity contained no foreign matter and was permeable to air.

The second opening was much lower and led into a fusiform cavity of considerable diameter. From its proximal extremity several branches were given off, with natural calibre, and permeable to the air, even to their vesicles; others were funnel-shaped, forming a cul-de-sac, and continued as solid fibrous cords: one of them, obliterated four lines from

its origin, instead of being continued as a solid cord, had its cavity reproduced and considerably dilated for eight lines in extent, and again obliterated in all its branches; this last cavity was filled with matter similar to that above described.

Let us observe the connexion between these changes and how some may induce others: it is very probable that the starting point existed in the first bronchia, and that the primitive alteration was a contraction, whence resulted the obliteration of a great many orifices leading into the bronchiæ. We cannot indeed admit that the orifices were closed in consequence of the obliteration of these bronchiæ, since we find the same occlusion at the origin of a branch which is very much dilated and filled with a peculiar matter. On the other hand we find two of these orifices in progress of obliteration, scarcely admitting the point of a pin, but each opening into a dilated bronchial cavity and permeable to air. We cannot admit that the obliteration of these tubes was the cause of the occlusion of their openings into the principal bronchia. But if we admit that this contraction of the orifices was primary, it will be easily conceived how, before it ended in complete occlusion, it might have induced the dilatation of the tubes—by opposing a barrier to the escape of the air at each expiratory effort. When the occlusion was effected, the dilated cavity must needs appear to be a sac, in which the products of secretion must collect, and the final ramifications would be obliterated when the contained air was absorbed. According to this view of the facts, the final degree of obliteration should be the closure of these dilated trunks—after the gradual absorption of the secreted matters. Indeed we have reason to believe this is effected, and that it is by the same process that in some rare cases, tuberculous cavities seem to become cured, or cicatrized. These interpretations are given as conjectural,

they have not warped our judgment in observing facts: in this as in all other cases, precision has been our chief ambition.

When speaking of the lesions of the lung that frequently accompany this affection, I said that we often observed it contemporaneously with tubercular disease. We frequently find, in different parts of the lungs of phthisical subjects, but especially near the summits, encysted or free masses, of a tubercular aspect, resembling calcareous matter diluted with water, or like dry chalk: these are of various size and consistence, some as large as a pea, others the size of a nut, and often, when at the summit, accompanied by a remarkable crimpling of the external surface. In almost all cases of this kind which we have carefully examined, the bronchiæ running to these altered portions of the organ were obliterated to some extent.

We shall cite a remarkable example: At the summit of one of the lungs of a female who died at La Pitié, from a cerebral attack, there existed a marked crimpling of the pleura, and at the corresponding part of the lung, was a cavity with firm greyish walls a quarter of a line thick, as large as a nut, and filled with matter resembling moistened plaster. The side of this cavity next the root of the lung was funnel-shaped, the cul-de-sac terminating in a fibrinous band the size of a crow quill, and this was the continuation of a considerable bronchial branch running in that direction and obliterated rather more than half an inch from the cavity: many neighboring bronchiæ were obliterated. Near the root of the lung there was a little fibrinous cord which arose from a large bronchia, and soon terminated in a cavity the size of a kidney-bean, which contained matter similar to that at the summit of the lung.

In a second case, there was a cavity at the centre of the inferior lobe of one of the lungs, the size of a very small filbert, with fibrinous walls, filled with old tubercular matter. A bronchia ran towards, but was obliterated within two lines of it: within a short distance of its insertion and running in the same direction, was another bronchia that was dilated, and filled, nearly to the surface of the lung, with matter, similar to that in the cavity. The walls of this tube were thickened, the internal surface white and fibrinous. The branches were oblitered some lines from the periphery of the lung and formed solid cords. This individual had been phthisical, and we found tubercles, both crude and softened. Whatever we may suppose to have been the nature of the primary alteration that caused this cavity and collection of matter, it appears evident, that having no exit in the natural direction, the tube being obliterated, the matter flowed into another branch, perhaps the continuation of the first, and caused its distension to so remarkable a degree.

It might perhaps have sufficed to have described this species of obliteration, and its connection with the alteration of the lung just mentioned, but we should investigate the cause of this lesion, and this discussion requires us to make some observations on the nature of these accidental matters contained within the pulmonary tissue. It is ever difficult to ascertain the origin and nature of any organic lesion, when we can only see the final results, and when the primary characters have been long effaced. Anatomy, when deprived of the aid of symptomatology, must depend upon its own discoveries. To recognize the more or less frequent coincidence of one lesion with another, to define their points of contact, to seek out carefully all their degrees, in order to observe the different points of relation, and connexion, are the only means

of induction which we are allowed to employ. These chalky masses and collections of calcareous matter, resembling partially dried tubercles, are frequently found in phthisical lungs, especially in advanced age. Still, they are frequently found without this disease of the bronchiæ, and, during a year spent in the Hospice de la Vieillesse, we were struck with the frequency of this alteration of the lungs. My old colleague and friend Dr. Secrétain, who was simultaneously engaged in another department, has made the same remark in his inaugural thesis.

This alteration was generally found in the summit of the lungs, while they, at the same time presented externally, considerable puckering; the neighboring pulmonary tissue was somewhat black, indurated, and connected by adhesions to the thoracic cavity. This accidental matter was always contained in a kind of sac, the walls of which were thickened, somewhat smooth internally and apparently fibrous, and colored to some extent by the black pulmonary substance.

The contents presented various appearances, sometimes resembling tubercular matter, only drier and more friable: at others, looking like the detritus of tubercular matter mixed with water, not with a purulent liquid as is seen in recent tubercular cavities. They often resembled moist plaster, or were quite dry and very friable, easily crumbling under the finger, or more dense, like a piece of chalk, and resisting the edge of the scalpel. It was not uncommon to find, in the midst of this substance, still harder portions, which were quite calcareous or sileceous. The color was not always of a uniform yellow, but often spotted with little black dots, or traversed by black lines. It was then evident that a portion of organized tissue entered into its composition. We once traced a number of bronchial branches into one of these cal-

careous masses, they were of a deep black, and after dividing several times terminated in their final twigs of the same color. In this as in analogous cases the matter adhered to the cyst, so that it was difficult to separate it.

Should we attempt, with a knowledge of the characters we have assigned to this chronic alteration of the lung, to trace out its origin, and indicate the kind of acute lesion to which it corresponds, we shall certainly conclude that it arose from an abscess, or from the softening of a mass of tubercles; most probably the latter, which is more frequent. Tubercles may exist in a limited portion of the lung, and their softening produce the morbid fluid contained in the cavity. We have remarked the frequent coindence of the two affections. Caverns, like the cysts or calcareous deposits, are most frequently situated at the summits of the lung—the slight difference in the structure of their walls may be explained by their various duration: in both cases, we generally find adhesions or other morbid lesions at the summit of the lungs, indicating previous inflammatory action.

The contained matter of both sometimes occur together, and they approximate each other so closely that it is often difficult to distinguish them: moreover, tubercular matter, when dessicated, resembles the calcareous substance above mentioned. In both cases we find remnants of organic tissues, indicating previous incomplete destruction of the pulmonary parenchyma, which occurred simultaneously with the suppuration, softening or transformation of the neighboring parts.

The puckering of the surface of the lung over these collections of matter, though not always found over tubercular caverns, may still serve to establish the identity of the morbid lesion in both cases. For what does it indicate but a retreat

of the pulmonary tissue at this point? What does this shrinking determine? probably a diminished volume of the cyst, either from the absorption or condensation of the more fluid parts of the contained matter; and we have observed a similar puckering over tuberculous caverns which are diminishing. Laennec has noticed some cases of cicatrized ulcers in the lung.

From these considerations we are led to conclude that one of these alterations is a termination of the other, and that obliteration is also a curative effort of ulcers or tuberculous caverns. The cure, in this case, (and I here speak only of a purely local disorder,) would not be effected by cicatrization; but, *first;* because the softened tubercular matter that was retained, would not leave a fistulous cavity; *secondly;* because, when encysted and becoming a foreign body, this matter would be inert, and subject to absorption and to chemical decomposition.

If this be true, we understand why this lesion is more frequent in old subjects than young ones, the latter being generally cut off before any recuperative action could effect those organic alterations that require a long period for their development.

The smaller bronchiæ, like the little vessels near caverns or abscesses of the lung, are always obliterated by the action which induces softening or suppuration. The coat, or pseudo-membrane which lines them, passes over their orifice. I have sometimes observed a cylinder of plastic matter, passing like a plug a short distance within them. This is always observed in oblitered blood-vessels, even of large size; but is rarely seen in the greater air tubes which are here interrupted, on the contrary, they are ulcerated laterally; sometimes their walls are lined with an inorganic, soft whitish layer. I

have not observed cases enough of abscess to know whether the bronchiæ undergo the same changes, but we have already alluded to one in which the false membrane that lined the interior of the cavity, continued into the principal bronchia and induced its obliteration.

In phthisis, I have only observed two cases where the false membrane of the cavern was also continued five or six lines into the cavity of a large bronchia, though without obliterating it; further and more minute observation may prove this condition to be of more frequent occurrence.

I shall not now attempt to point out the period at which any obliteration has occurred, that may be observed near tubercular caverns: in abscess, I consider it probable that it results from the inflammatory action. Perhaps in some cases of tubercular softening, attended by evident inflammatory action, changes are produced in the same manner. At what stage soever the lesion may occur, we know that its effects ought to be the same, whether we refer the difficulty to the introduction of air, or the ulterior changes that may thence ensue in the substances contained in the morbid cavities.

Physiological Effects.

To complete this subject, we must briefly advert to the consequences which these obliterations may produce in the lung itself. We have said that the neighboring bronchiæ were sometimes dilated, and that the surrounding pulmonary parenchyma was emphysematous. The organization of the lung is such that the various constituent parts cannot be supplied from one another: in the vascular system, on the contrary, an obstruction at any one point, can only produce a momentary suspension of the circulation; numerous anasto-

motic passages re-establish it, and carry the blood by other channels to the parts where it was impeded, and even to the lower portion of the obliterated vessel itself. Indeed the circulation seems temporarily increased, nor is it for some time restored to its natural condition. On the contrary, the entire absence of anastomoses in the bronchiæ, renders this transfer of air by collateral channels impracticable in all the parts to which the obliterated bronchia had been distributed; hence ensues a diminution in the extent of the respiratory surface, equivalent to the whole portion of the organ from which the air is excluded. Moreover, the inspiratory effort, or the force which introduces a given quantity of air into the whole lung, being undiminished, it produces the dilatation of the neighboring parts. Whence ensues a new source of diminished respiratory surface which keeps pace with the dilatation of the bronchia, and rarefaction of the pulmonary tissue.

If this obliteration were to exist at the same time in many bronchiæ, it would probably give rise to appreciable physiological effects; the respiratory murmur would no doubt be considerably modified in the parts near the alteration; though we are here little aided by auscultation. Among the symptoms observed in the patients, it would be difficult to discover which really belong to this lesion.

Having finished the first part of our work, we have now to speak of two other species of bronchial obliterations.

Obliteration of the bronchiæ, in consequence of a substance formed and accumulated within them.

Under this head we shall refer to the small bronchiæ and their terminations, having never observed large tubes occluded in this manner, though the small bronchial tubes are fre-

quently filled and distended with matter of various character.

Sometimes the obliteration was confined to a small extent of the bronchia, and produced by a roundish mass; sometimes it continued along the tube filling all its divisions, even the terminal vesicles. It was either confined to a single branch or extended to all the branches of a lobe; whence resulted masses of altered pulmonary tissue: here the precise seat and nature of the lesion could not be determined by the external aspect of the lung, nor by a few cuts into its substance; it was necessary to dissect each separate branch, to discover that the general alteration resulted from the united obliteration of these several bronchiæ.

This obliterating matter resembled both tubercle and pseudo-membranes. In the first case, the consequent lesion offered characters of phthisis, producing granulations when isolated, and infiltration when diffused: in the second case there was a peculiar pneumonia or hepatization, which I shall here describe.

A man died at La Pitié in the last stages of an acute pneumonia, which had run its course very rapidly. At the autopsy, the left lung was found almost entirely hepatized, a portion of the summit only being sound. Cuts made in several directions presented a grained surface, which was red, interspersed with paler spots—at some points yellowish and black. In some places the color was more uniformly grey or like pus. The organ was covered with a recent, yellowish false membrane, that was not disturbed by opening the thorax. The density and specific gravity were the same as the liver: it was readily broken by pressure, and contained no air.

This was evidently a case of pneumonia in the second degree passing into the third or suppuration: as yet nothing

was discovered to distinguish it from red or grey hepatization. But a more careful examination revealed cylinders of a tough substance jutting from the cut ends of the bronchiæ of the third and fourth order, and resembling the plugs of coagula found in blood-vessels. By making longitudinal incisions the bronchiæ were found to be filled with this substance forming a solid cylinder that followed the divisions even to the vesicles, and could be lifted out, so as to present the branched arrangement of a tree. These cylinders were generally very regular, except where they were garnished with small rounded lateral enlargements, (*renflemens,*) either isolated or clustered in festoons. Some of the cylinders presented these only on one side; to demonstrate them, it was only necessary to exert a slight traction upon the principal cord. Near the pleura these enlargements were more numerous, giving the divisions of the cords a knotted appearance, and immediately beneath this membrane their volume, form and color, precisely resembled the grains that appeared on a first glance at the lung, giving it, in the highest degree, the granulated aspect, which characterizes one of the forms of hepatization. The same thing was observed on the surface of the incisions: all the bronchiæ we examined were affected—and they were filled inversely to their size; for where the plastic matter first appeared, it occupied less than a third of the bronchial calibre, whereas, when it approached their terminations it completely filled the cavity.

In external characters this substance resembled fibrine; it was a pale yellowish white, resisting, elastic and divisible into filaments. Under the microscope one of them seemed made up of globules like those of the blood. In the lateral and terminal swellings (*renflemens*) the colour was greyish, or stained with black. There were also some differences in those parts

of the lung which were in the second or third stages of pneumonia: in the latter, the filaments were tarnished, moist, thinned and less resisting.

Nothing remarkable was observed in the texture of the bronchial walls, where these tubes were large enough to be examined, except that some of them seemed to tear more readily than in health. Towards their termination, many partook of the color of the contained matter, and some black lines were observed opposite to the swellings. The vessels were completely empty, and where they could be opened, white, without any evidence of inflammation. Finally, between the different terminal branches, there were red cellular spaces, that projected less than the greyish grains. In those parts hepatized to the third degree, the color of the grains and tissue was similar, but the former were less prominent and the latter was less granulated.

I have observed these alterations four times in subjects that had died of acute pneumonitis, and whose lungs presented only the characters of ordinary hepatization, upon the usual mode of examination. Further researches alone, can determine whether the silence of authors, and the paucity of our own observations, are attributable to the rarity of the lesion, or to an imperfect examination of the lungs. Obliteration of the bronchiæ by plastic matter, here constituted the main point of the alteration, and undoubtedly caused its severity. The last case ought also to be cited as proof of the true arrangement of the bronchiæ, since a cast was furnished of the ramifications.

A protracted and carefully digested consideration of the products that result from various morbid alterations, and of the changes which they may induce, has led us to believe that plastic lymph, the pseudo-membranes, the solid parts of

the blood and fibrine itself, retained by any cause in the vessels, may, under peculiar conditions of the general economy, be transformed into various morbid products, without the necessity of any complicated organic apparatus being formed of the various parts. But, let us here ask, what would have become of the plastic matter in the bronchiæ of the cases just cited, had the patients been under the influence of a tubercular, schirrhous or other predisposition. Would not this case of pneumonitis, in a phthisical person, have produced some remarkable transformations in a lung, making it appear changed into a compact tuberculous mass? We know that such a condition is not uncommon in children, and we have often found it in the monkey of our menageries, an animal which is perhaps more subject than any other, in our climate, to pulmonary phthisis.

The following case of this kind is related to exhibit an alteration characterized by obliteration of the bronchiæ. The patient died under the care of M. Louis; he had presented symptoms of pulmonary phthisis. The left lung adhered throughout to the costal pleura, and intimate adhesions connected it with the pericardium. The pleura pulmonalis, over the whole extent of the superior lobe, formed a greyish white layer a line to a line and a half thick. A longitudinal section of this lobe showed a cavity in the upper half, the lower portion was transformed into a compact mass of a yellowish white color, firm, smooth on the incised surface, grained where torn, and yielding under the nail like crude, firm tubercular matter: the vesicular structure was destroyed, and, except the empty orifices of some large tubes, presenting no appreciable traces of blood-vessels or permeable bronchiæ. From the inner surface of the pleura, ran partitions of a greyish white color, as firm as the fibrous tissue, and which divided the mass into a number of separate compartments.

A minute dissection enabled us to make the following discoveries in the different anatomical elements of the organ the bronchiæ were free for a certain extent; their calibre appeared rather smaller than natural; the branches of the size of a large crow-quill, were partly filled with a yellowish white substance, which might be drawn out of the tubes by a slight force: this matter pervaded the smaller divisions of the bronchiæ, filling them more completely and even adhering in the small twigs, where it was confounded with them, so that it could only be demonstrated by pressing a portion of the lung between the fingers so as to make the matter spring out from the tubes. In the larger tubes this substance had little consistence, was soft, and of a paler color than the parenchyma; as we approached the bronchial extremities it became firmer, and its color more nearly resembled the neighboring parts. The walls of the larger air-tubes were not reddened, further on, they were transformed into tuberculous matter, and finally lost all of their natural characters except their canaliculate form. The same thing was observed in regard to the large bloodvessels, springing from the base of the lung, the isolated branches ran to separate points of the cavern, and were lost in the altered tissue at its surface: and many secondary branches were obliterated, and floated freely in the cavity. All the branches, when cut across were empty near their roots, further on, they contained coagula, their walls were covered with a layer of firm reddish tissue, that sensibly increased their thickness.

We know of no better title to designate this alteration than tuberculous croup of the lesser bronchiæ and vesicles. As in the preceding case, we found the bronchial tubes obliterated by being filled with solid matter, and their terminal divisions so changed as to resemble the matter they contained. We

should also observe, that where it commenced in the bronchiæ of considerable size, this matter had not the tubercular appearance, and resembled the plastic matter of ordinary false-membranes.

I could report many cases where this kind of obliteration of the bronchiæ, from tubercular matter at circumscribed points of the organ, gives rise to granulations, and to one of the forms of anatomical lesion of phthisis. But, my observations on this subject having been made in consequence of communications from my friend, Dr. Carswell, I shall allow him to use the facts, with his own views of the primary seat of tuburcle in the lung.* Feeling confident that the subject will be treated with superior ability, I shall pass on to the third species of obliteration, that caused by compression.

Obliteration of the Bronchiæ by Compression.

Many causes conspire to obstruct the air by compressing the passages, but I shall here confine myself to cases of complete obliteration. All tumours must produce this effect in the neighboring tubes: we have seen it effected by little calculous masses as large as peas, and here the occlusion continued to the end of the tubes.

We have not had time to assure ourselves that a number of the small bronchial tubes are not also obliterated in the disease described by Bayle as granular phthisis. This lesion would greatly diminish the field of respiration, when coincident with tubercles, the softening of which would obstruct the passage of air to other portions of the respiratory surface. I have not found obliteration from this cause in the large

* See Pathological Anatomy. Illustration of the elementary forms of disease; by R. Carswell, London, 1833; Nos. 1 to 6.

bronchial tubes and their primary branches, but have seen a tuburcular tumour developed around the first bronchia, whence arose all the branches of one lung. The subject was a monkey of the genus Macao, which had died of phthisis, after having been long kept in a menagerie. Some of the organs were highly tuberculous: such as the lungs, liver, spleen, mesentery and bronchial glands, and a mass was found in the pericardium. The left side of the thorax was decidedly shrunken, as it would have been after the absorption of a pleuretic effusion. The corresponding lung occupied much less space than usual, was quite void of air and looked as though it had been crowded against the vertebræ by an effusion: there was not, however, a trace of liquid, and the pleura was perfectly healthy and free from adhesions. Inflation of the lungs through the trachea dilated the right only. There was evidently a considerable obstruction at some portion of the left bronchus, which indeed could be penetrated but a short distance.

A rounded mass of tuberculous glands embraced this tube, which it had flattened and completely obstructed. When cut transversely, there appeared only a linear furrow, through which a slender scalpel handle might be introduced; beyond this the bronchus had its natural cavity, but, instead of being lubricated with the usual thin, frothy secretion, there was a reddish glairy mucous, without air-bubbles and resembling that often found in the neck of the uterus or in its cavity after death. This lung must have been quite impermeable to air during life. It may be asked why this obstacle, which prevented the entrance of air, did not also hinder its escape, and why that which was contained at the moment of complete obliteration, should not have remained incarcerated? We suppose that the air was insensibly absorbed, as is proba-

bly the case, to some extent, in health, and as is frequently observed in emphysema of the cellular tissue in all parts of the body. Another important fact observed in this case, is the shrinking of the thorax, in consequence of the obliteration of the bronchia which was destined to supply this lung with air. The ribs, though unattached by adhesions, were forced to follow the retreating lung, by the atmospheric pressure from without. I know of but one parallel case of shrinking in the human subject; perhaps a similar obliteration has never been seen. The fact just related, though belonging to comparative pathological anatomy should attract the attention of practitioners to this subject.

I shall now consider my task completed. The importance of the subject has perhaps been exceeded by the length of the memoir; but, I hope this will be obviated by the novelty and interest of the facts recorded.

ART. II.—*Utility of Tonico-astringent Injections into a Suppurating Abscess. A Case. By* NORVIN GREEN, M. D. *of Bedford, Ky.*

Mrs. W——, a stout, healthy female, aged 22, with a temperament partaking somewhat more of the lymphatic than the nervous, was delivered of her first born February 11th. On the 14th the left mamma presented symptoms of inflammatory action. Pain, hardness and swelling, were experienced, confined exclusively to the one side. Vinegar evaporations, light-bread and flax-seed poultices, and other well known and fashionable remedies were speedily resorted to; but without even a palliating effect. Drawing the breast

and general reduction, however, were unfortunately neglected. The action proceeded rapidly to suppuration, and pointed on the 19th, externally and near to the nipple. From this time for more than three months, various applications in the form of poultices, salves, strong oozes, etc., had been successively employed, which, only serving to promote the rapidly wasting suppuration, it was deemed commendable to have medical aid.

On the 24th of May I was summoned to Mrs. W. Though quite alarmed at the stubbornness of her disorder, yet my patient was entirely ignorant of the amount of disorganization already effected by this draining malady: for almost the entire gland had been broken down and borne off by the ravages of unsparing suppuration. In three directions sinuses were formed: left and downwardly, right and downwardly, and almost directly upward. In the first mentioned opening, the probe passed with great facility to the distance of four inches; and in the last two, to nearly the same extent. The constitution, too, had participated largely in the suffering. The patient had greatly diminished in flesh and strength; stomach and bowels much disordered; a considerable degree of nocturnal restlessness, with strong threatening of, if not actually already, incipient hectic.

Such constitutional remedies, as were thought indicated by the general symptoms, were administered, and as nourishing a regimen adopted as the chylopoietic derangement would allow. A seton of linen tape was introduced through the left lateral sinus, existing at the base of the gland; and another, in like manner, through that of the right. Finding it next to impossible to prevail on my patient to submit to the pain of further operation, I consented to leave the diseased action of the superior portion unaddressed by local remedial agent,

until some benefit should be realized from those already applied.

Due attention was given to the progress of the case; the setons were every day required to be moved. Fearing the tapes were insufficiently exciting, after a short trial they were rubbed, before moving, in pulvis plumbi acetas; and, finally, various mineral astringents were successively employed, (some by injection) to aid in exciting granulations. This course was perseveringly pursued for near six weeks, (the period allotted for a cure by Dr. Physic,) without sufficient benefit to encourage the hope of a reproduction of the parts, or the restoration of the organ to its natural function.

I now thought of laying open the abscess in the several directions of its ravages, and healing from the bottom as an ulcer; but the reluctance of my patient suspended the operation, until, in a correspondence with Prof. Miller, I enquired what more efficient applications would be worthy of a trial. Among other means, he recommonded the use, by injection into the sinuses, of the *tinctura g. aloe et myrrhæ*. Entertaining the highest opinion of the practical skill, as well as scientific attainments of Dr. Miller, I was readily persuaded to give a fair trial to any remedy he might suggest. The tincture was accordingly prepared, after the formula of the Ed. Pharmacopœia, the saffron excepted. Its use was commenced on the 1st July, diluted, at first, to one part of the tincture to two parts of water, and the abscess directed to be filled twice in twenty-four hours; the injection to be retained as much as could be with a tent of lint, till the period of the succeeding dressing. The injection was ordered to be gradually increased in strength; but the thoughtful care of the patient did not allow its use at more than half strength, finding

that, in an undiluted form, it produced painful and prejudicial irritation.

On the 10th July, I found the cure promisingly commenced, the sinuses beginning to fill up, and that one in farthest advance in which no seton had been introduced. The tapes were now removed, and all treatment suspended, save the injection, which the lady had learned to regulate to the best advantage. I saw the patient no more, but to furnish additional supplies of the remedy, which were as often sent by a messenger without further direction.

The recuperative powers now proceeded even more rapidly than had done the disorganising; it required successively a less amount of the tincture, than at the preceding dressing, to fill the cavity, till, by the 10th of August, the cure was complete. I have examined the breast, and find that the reparation is entire, and to all appearances, has every promise of the same usefulness as the other.

Remarks.—Great access to the cause of humanity was claimed, in the treatment of mammary abscess with the seton, as instituted by the "father of American surgery," in lieu of the "bold incision;" but, while I would not depreciate a popular remedy (supported, as this has ever been, by the highest authority,) on account of a single failure, yet it will be readily admitted, that should general experience corroberate the observations of this case, we have a class of remedies which need be attended with comparatively little inconvenience or suffering, and are far more efficient than even the boasted reformation. In this case, the superior efficacy of the vegetable tonic, *locally applied*, over mechanical irritation, or mineral astringents, for the purpose of changing an indolent and wasting into a granulating and repairing surface, is clearly exhibited;

and it remains to be seen, whether the same will not obtain in ulcers and other lesions of this low and obstinately indolent character.

Bedford, Ky. 1840.

ART III.—*History of a Case of Autumnal Fever; accompanied by the vomiting of a fluid of a deep blue color.* By GEORGE K. HOLLOWAY, M. D., of Panola, Mississippi.

On the 19th of September, 1840, J. W. Mitchell, aged 22 years, of a bilious temperament and sedentary habits, began to complain of lassitude, and pain in his head and back, with confined bowels. These symptoms increased through the night, and on the 20th he was much worse than the day before. The following night was one of great suffering and restlessness; the pain having extended from the spine into his limbs and epigastrium, the latter of which, moreover, was the seat of oppression and fullness. The next morning, 21st., his visage was haggard, and, spontaneous vomiting coming on, he threw up a quantity of *thick, deep blue fluid.* The lady of the house at which the patient lodged, being struck with its appearance, washed a rag upon which he had vomited, in clear water, and found that it imparted an indigo color to the fluid. The master of the house now administered a dose of colomel which opened his bowels, but did not mitigate his symptoms. Indeed, they increased in violence, and a sense of choaking with frequent sighs came on, the material vomited up, still exhibiting the same color. On the 22d his condition was still worse, as he had intense thirst and great rest-

lessness, and more frequent blue vomitings. Another and larger dose of calomel was now administered, which produced copious, thin, bilious stools, with considerable discharges of flatus, but the succeeding night was one of great sleeplessness and great anxiety.

In the forenoon of the next day, 23d, we saw him for the first time. He was in a state of the utmost alarm; his visage almost Hippocratic; eyes red and wild; forehead, neck and breast, cool and wet with sweat; tongue tremulous, pointed towards the tip, dry and red on its edges, its papillæ of a darker hue and raised, and it was with difficulty that he could project it over his teeth; the mucous lining of his mouth and fauces were as red as in scarlatina; his pulse was 120 or more in a minute, but full, soft and compressible; his restlessness was extreme; the pain in his loins intense; the discharge of urine small and with difficulty; the discharges from the bowels watery, bilious and frequent; the epigastric distress intense; and the vomiting of a deep blue matter constant. This fluid stained a linen rag as blue as if it had been dipped into a saturated solution of Indigo. Its quantity was very great, and the stomach so excited, that the slightest mechanical irritation of the fauces would bring it up. Not having before met with such a case, we supposed the patient might have taken something which had colored the contents of his stomach; but on careful inquiry found that he had not.

The case appeared hopeless, but we felt it a duty to prescribe, and directed as follows: A blister from the ensiform cartilage to the symphisis pubis, and another on each ankle, with one of the following powders every four hours—

℞. Submur. Hydrarg. grs. xv.
Pulv. Ipecac et Opii aa grs. viij.
Mix and divide into four powders.

To the first of these powders we added a quarter of a grain of the sulphate of morphine. The powders did not increase his nausea, which, at no time, was proportionate to the vomiting; and they moderated the purging. Towards day of the twenty-fourth, he had a tolerably consistent alvine evacuation, which, however, displayed a bluish tint, and was extremely fœtid. We now omitted the ipecac and opium, and gave him three grains of calomel with a fourth of a grain of the sulphate of morphine every four hours. During the day he had two consistent alvine discharges.

On the 25th we found that he had passed the night without any further alvine evacuation, but the vomiting had continued. His pulse was less frequent, and rather fuller. Same medicines continued.

26th. Had one evacuation last night, after which he was inclined to sleep. This morning he seemed to us better; but complained of some abdominal fulness. We prescribed five grains of calomel, and half a grain of morphine, every six hours. In the course of the day, he had one full and consistent stool, of a bluish green color. In the evening we left him on the use of this compound, with orders that he should take a teaspoon full of denarcotised laudanum, if excessive and watery purging should come on.

27th. On arriving we learned that in the early part of the night he had a most profuse evacuation, followed by great relief, and another also large, and likewise productive of relief. Immediately after the last, his attendants unfortunately gave him the laudanum. He had no more, and did not sleep. Our arrival was at 10 o'clock, when we found him in all respects much worse. A hiccup had supervened, with subsultus tendinum and tinnitus aurium; the surface of his body was covered with a cold sweat; his respiration was hurried

and laborious, with constant sighing, and ceaseless jactitation; he vomited much, but the fluid now thrown up was of a bistre brown instead of a blue color; his pulse had also suffered a signal change, being very small and frequent, and his alarm and terror were of the most remarkable kind. In this extremity we made extensive application of blisters; gave him twelve grains of calomel every three hours, resorted to injections and suppositories to bring on immediate alvine evacuation, and administered stimulants and tonics; but the last increased the irritability of his stomach and had to be omitted. About 8 P. M. he had a copious, tolerably thick, but fœtid alvine discharge, which was followed by great relief from most of his symptoms, and a slight strangury came on.

Some of his friends now expressed to him the opinion that his disease would terminate fatally, whereupon his terror, which had much abated, was reproduced, and all his bodily symptoms became worse. His pulse sunk, as did the heat of his extremities; his face assumed a cadaverous aspect; the vomiting of the bistre-brown fluid, as thick as the white of egg, returned, and dissolution seemed to be at hand.

A consulting physician was now sent for, but did not arrive till the morning of the 28th. Before sunrise of this morning, our patient threw up about two quarts of fluid of the same color as that discharged the day before, and he continued to gulp up the same kind of fluid till within fifteen minutes of his dissolution, which, however, soon occurred. A *post mortem* examination was not made.

We regard this as a case of malignant Congestive Fever, the striking peculiarity of which was the blue and brown discharge from the stomach.

For our views on Congestive Fever, we beg leave to refer

to the *South. Med. and Surgical Journal*, for the month of May or June, 1839, published at Augusta, Georgia. Those views, however, were formed from observations made in the arid climate of that state, and are not in all respects applicable to the fever as it occurs in the more humid atmosphere of the state of Mississippi. Here the symptoms are more insidious and equivocal than in Georgia. Often to superficial observation, nothing more than a simple intermittent of the tertian or quotidian type, or a mild remittent, seems to be indicated; but a close observer will detect its malignant character, in the early cold and clammy sweats of the upper part of the body; the tremulous motion of the tongue; its conical point; the difficulty of projecting it; the dry and rough, or smooth and slimy surface which it presents, and the fiery redness of its edges—appearances which do not occur in simple intermittents and remittents, except under excessive purging. Great flatulence is also present in the malignant cases, and the intermission is, in general, imperfect.

The only modification of the treatment we had pursued in Georgia, which we have found necessary in Mississippi, is the administration of larger doses of cathartic medicines in the beginning, as more is required to purge the patient; but afterwards we have found smaller portions, than are required in Georgia, sufficient to keep up the purging; which is more likely to degenerate into a watery diarrhœa in the former than in the latter region. In both states, our reliance is on calomel, ipecac, and opium, or the sulphate of morphine. Saline and drastic purgatives are injurious, and the lancet generally inadmissible.

October, 1840.

ART. IV.—*A Case of Hepatic Abscess, in which Biliary Calculi were discharged at the side, after an operation, resulting favorably.* By WILLIAM DAWSON DORRIS, M. D., of Nashville, Tennessee.

The following case was discharged from my care a few months since, and the fortunate issue of it under the most unpromising circumstances, together with the unusual number of calculi discharged after an operation, I believe, not often resorted to, induce me to hope that it will not be found uninteresting to the readers of the Journal. The subject of it was a lady, Mrs. E. Y., æt. about 31 years, corpulent, and of the phlegmatic temperament. In February, 1838, I was first requested to visit her, and found her laboring under prolapsus uteri, attended with diarrhœa. Her menstrual function was also deranged, and at each monthly period the right ovary was so enlarged as to be distinctly felt on examination. In April she labored under the symptoms of internal polypus of the uterus, with uterine hemorrhage at the menstrual periods. About this time she had a copious discharge of a dark colored fluid, per vaginam, which gave her great relief, and the enlarged ovary ceased to be perceptible; her catamenia also returned and her health appeared to be much improved. About this time, however, she began to complain of pain in the region of the liver, for which I prescribed mercurial cathartics, Dover's powder, and warm fomentations. Her bowels were torpid, and required habitually to be moved by cathartics. In September she was attacked with bilious remittent fever, from which she was recovered by the usual treatment in two weeks.

November 1st. the patient was relieved of a polypus as large as a duck egg, and with it of the hectic flushings, the

uterine hemorrhage, and all the other unpleasant symptoms which denoted its presence. But symptoms of ovarian disease still existed, and in March I found her suffering again with prolapsus uteri, and torpor of the liver and bowels. The uterus was restored to its place, a saline draught administered to move her bowels, and morphine given for the severe pain.

Under the treatment which was modified from day to day the sufferings of the patient were mitigated, but on the 13th of April I found the liver and right ovary much enlarged Ordered the skin over those parts to be rubbed with ung. hydrarg.

16th. Gave jalap 15 grains and rhubarb 5 grains.

18th. Found medicine had acted well, my patient sitting up and feeling much better.

22d. Enlargement of her side increasing rapidly, and for the first time during her illness, she is losing flesh. Complains of great burning in the right side, and is slightly salivated by the mercurial inunctions.

25th. Patient has been more comfortable for several days, and the indications of abscess of the liver are such that I proposed an operation; but as many physicians had been consulted on the case and had not agreed as to the nature of the affection, the lady objected.

May 1st. I had the pleasure of meeting Dr. F. Robertson in consultation. The tumor in the region of the liver was now eight inches in width, and twelve inches long. It was easy to perceive the interstice between that organ and the ovary, though their unnatural growth had brought them into contact. Blisters were applied over the tumor, with blue pill, sup. tart. potas. aloes and rhubarb to keep the bowels soluble. Fomentations to be continued.

2d. Blister drew well; purgatives acted freely, and the bile discharged produced great irritation in the rectum. Blue pill with hyosciamus to be continued.

5th. Blue pill discontinued, ptyalism having come on. Patient is discharging a soot-colored fluid through the vagina, and the enlargement of the ovary is visibly on the decline, while that of the liver is increasing.

9th. Patient very restless; has had shiverings, and syncope; pain in the right side, back and head, excruciating.

12th. A discharge from the bowels, of most offensive odor, appeared, and of black, yellow, green and white colors mixed. This matter continued to pass off from her bowels for a few days, and on the 15th she began to vomit a fluid of the same description.

16th. Patient better—hyosciam. pills to be continued, with mild purgatives.

21st. The enlargement of her side amounts to a deformity. She has passed five biliary calculi per anum.

22d. Visited her in company with Dr. Robertson, who advises her to submit to having the tumor punctured.

23d. Operated, by making a transverse incision two inches and a half in length through the integuments, and about two inches through the muscles down to the liver, which was found attached to the parietes of the abdomen. About a quart of such matter as she had discharged by the bowels flowed out, when faintness came on and made it necessary to check the flow for the time. Up to the 31st., the abscess continued to discharge freely at each dressing; the patient is so far improved as to be able to sit up.

June 6th. The incision being kept open, I extracted five biliary calculi of the size and shape of a beech nut, some of which when recently removed weighed twelve grains.

8th. Three biliary calculi removed at this dressing. Patient recovering.

11th. I extracted at this visit eighteen calculi, fourteen of which had a common, very thin, membranous envelope.

August 1st. Patient improves, using pil. hydrarg. and hyosciam. pro re nata. Up to this date one hundred and one gall stones have been extracted through the incision.

27th. Patient is able to attend to her household affairs. From this period until the 18th of December, ten more calculi were extracted, when the orifice began to close.. Thus, in all, one hundred and eleven calculi were taken away by instruments, and five were discharged per vias naturales. The health of the lady continued steadily to improve after the opening of the abscess, and it is better in every particular than she has enjoyed for many years.

I have not pretended, in the history of this case, to give all the minutiæ of treatment pursued during its progress, as there was nothing peculiar in it, and as the result did not appear to be brought about by the medicinal agents employed. It is a case beautifully illustrating the *vis midicatrix naturæ*—that conservative power by which offending matters in a deep seated and vital organ are directed to the surface of the body and there discharged.

March 17, 1841.

ART. V—*Case of Pretended Mayhem, which was tried before the Mayor's Court in Cincinnati, March*, 1840. By S. D. GROSS, M. D.

The following case is interesting not only in a physiological point of view, but also as a "little piece" of medical jurisprudence, and deserves to be recorded as a warning to those who, under an idea that they are infallible, never make any but the most hasty and imperfect examinations, no matter whether they involve life, property, or reputation.

Two lads, Hiram and Jackson Black, the one fourteen, the other eleven years of age, after having resided about two years at the Shaker village, in Crosby Township, within twenty-two miles of Cincinnati, returned to their home in Bracken county, Kentucky, where a report was

soon after circulated that they had been emasculated by some of their late brethren. Upon inquiry, the mother and uncle of the boys confirmed the story, alleging that both were without testes, in consequence of an operation that had been performed on them the preceding summer. An outrage such as this was well calculated to inflame the public mind, and accordingly several of the most intelligent and influential citizens of the neighborhood, determined to sift the matter to the bottom, addressed a letter to Bellamy Storer, Esq., requesting him forthwith to institute suit against the supposed offenders. The boys, accompanied by their uncle, soon after appeared in Cincinnati, making affidavit to the circumstance above mentioned, and undergoing an examination by an old medical practitioner, who, in addition to the deficiencies already alluded to, testified as to the presence of distinct and well-marked cicatrices on the scrotum of each of them.

In consequence of the evidence of this gentleman, legal proceedings were immediately instituted against the Shakers, four of whom were apprehended, and lodged in the county jail. In the meanwhile, at the request of the counsel for the defendants, Messrs. Riddle & Roll, I visited the village to examine into the condition of the other male children at the establishment, with a view of ascertaining whether they also had been subjected to that kind of treatment. It was soon apparent, however, that no such operation had been performed, as all the boys, twelve in number, from the age of two years up to that of eighteen, had no cause of complaint in that particular.

The next day, after reporting the result of my observations to the court, I was requested also to examine the complainants, Hiram and Jackson Black, in conjunction with the gentleman who had previously investigated their cases, and testified as to the absence of their testes. The scrotum of each was, indeed, empty, but as to scars or cicatrices, none could be seen, though several folds of the skin, or rather the smooth, glossy intervals between them, were pointed out, with no little self-complacency, as evidences of their existence. On a little further search the *lost* testicles were found to be situated in the groin, a little below the external ring, whence with a little traction they could be easily forced down into the scrotum. This announcement of course put at once an end to the trial, to the great delight of the poor Shakers, the dismay of the *medical jurist*, and the great merriment of the by-standers.

It is not a little singular that, in both these cases, the testes should have been so late in descending into the scrotum. The lads were of rather short stature for their age, but in other respects perfectly well-formed. The testes were about the ordinary size and consistence; and although they could be easily pressed, as already stated, into the scrotum, yet they immediately re-ascended to their former position, as soon as the fingers were removed.

REVIEWS.

ART. I.—*Du Varicocele, et en particulier de la Cure Radicale de Cette Affection ; par* H. LANDOUZY, *interne a l'Hotel-Dieu, membre de la Societe Anatomique et de la Societe Medicale D'Observation, &c.*

Essay on Varicocele, particularly on the Radical Cure of this Disease. By H. LANDOUZY. 8vo. pp. 120, with a lithographic plate. Paris: 1838.

A monograph on varicocele is an acknowledged desideratum in our surgical literature. No sufficient work has ever been issued from the British or American press on the subject, and if it be true, as M. Landouzy seems to think it is, that six-tenths of the male sex are afflicted with this singular malady, a careful analysis of the contents of his essay will not, it is believed, be unprofitable.

The term varicocele, compounded out of the Greek and Latin, is employed to designate a dilated condition of the veins of the scrotum and spermatic cord, and is regarded by the author of the present essay as synonymous with the word circocele and varicose hernia. By some of the older writers, such as Celsus, Murray, Waitz, and Mosc, the affection is described under the appellation of circocele, while Callisen, Boyer, Delpech, Sir Astley Cooper, Breschet, Blandin, Velpeau, and other modern surgeons, use the name varicocele to

denote the varicose enlargements of the scrotum, no matter what part of it they may implicate.

Although this disease occurs exclusively in the male, yet there is occasionally in the pudendal lips of the female a varicose disposition which corresponds in its essential features to the varicose enlargement of the scrotum; the veins of the ovaries and of the round ligament of the uterus are also liable to a species of dilatation which may be said to resemble that of the spermatic cord. Still the affection is very different in the two sexes; for while in the female it is caused either by pregnancy or some lesion of the abdomen, and is therefore usually of a transient nature, disappearing with the removal of the cause by which it was induced, in the male it is not only more permanent, but is apt to be attended, if allowed to proceed unrestrained, by very serious consequences, especially to the corresponding testicle.

Varicocele may appear at any period of life, in the young as well as in the old. Professor Delpech, of Montpelier, thought it was almost exclusively confined to adults or aged people; an opinion which is directly opposed to that of M. Landouzy, who, in twenty-seven cases in which this subject was noticed, ascertained that seven occured between the ages of nine and fifteen; seventeen between fifteen and twenty-five; and three between twenty-five and thirty-five. Thus, if this statement can be relied upon, and we can see no reason to doubt it, it must be concluded that the malady in question is most common, by far, in young subjects within the first ten years from the time of puberty, or during the period of the greatest excitement of the genital system.

The development of this disease appears to be greatly influenced by the anatomical disposition of the parts, as the dependent situation of the spermatic veins, their length, the

feebleness of their parietes, relatively to the course which they are obliged to traverse, the absence of valves, and especially the frequent alternations of repletion and vacuity to which they are exposed in the various attitudes and movements of the body. Another cause which likewise powerfully contributes to the production of varices, is the enormous quantity of veins which, under the name of the pampiniform plexus, give rise to the veins of the testicle. In the normal state, andparticularly when the scrotum is contracted, this venous packet does not appear to be very large; but as soon as they are in the slightest degree enlarged, or even when the parts are merely relaxed by heat, a good idea of it is afforded by the immense number of venous branches which surmount and encircle the testicle and epididymis. Besides these circumstances, our author supposes, and very justly as we think, that the pressure of the column of blood in these vessels must, according to a well known law of hydrostatics, exert no little influence in the formation of varicocele. J. L. Petit was inclined to ascribe considerable importance to the weight of the testicle, which has a tendency, he imagines, to obliterate the vessels at the external ring, and thus render the return of their contents more difficult.

Pathologists have long been familiar with the fact that varicocele is much more frequent on the left side than on the right, and many ingenious notions have been offered in explanation of it. Morgagni originally suggested the idea, which has since been adopted by many others, that it was owing to the more dependent situation of the left testicle, and the greater length of the left spermatic vein, which, instead of pouring its contents into the inferior cava, like the right, terminates in the left renal, nearly at a right angle with the current of the blood from the kidney. Others have attributed

the greater frequency to the compression made upon the spermatic vessels of the left side, by the fœcal matters accumulated in the iliac portion of the colon. Such, among others, is the opinion of Callisen and of J. L. Petit. According to M. Landouzy, however, this influence is greatly overrated, as out of seventeen patients whom he carefully examined in reference to this subject only a single one was found to be habitually affected with constipation of the bowels. He also thinks that the opinion of Dr. Lenoir, of Paris, who attempts to explain the circumstance in question by the narrowing of the left inguinal ring, from the frequent contraction of the abdominal muscles, although plausible, is without foundation; a view in which we entirely concur with him. Be the cause, however, what it may, the fact is undeniable that the disease is generally found on the left side, as we have pointed out in another publication. In upwards of one hundred cases examined by Breschet, of Paris, only one occurred on the right side. With this result the experience of nearly every practitioner must coincide.

The exciting causes of this affection the author arranges under two heads, under those, namely, which facilitate the afflux of blood to the genital organs, and those which prevent its return to the heart. These two orders of causes may exist separately, or occur conjointly in the same individual. In the first may be enumerated all venereal excesses, masturbation, violent passions, riding, dancing, severe exercise on foot; in short, whatever has a tendency to invite the blood constantly to the lower parts of the body. Under this head, may also be included violent contusions of the scrotum and inflammation of the testicle, whether essential or symptomatic, which, by keeping up irritation and a considerable afflux of blood, may at length produce dilatation of the ves-

sels, or render them more sensible to the causes of accidental enlargement.

The causes of the second order are much more frequent, since they embrace every thing that opposes an obstacle to the return of the blood to the heart. Thus, tumors developed in the abdomen, whatever may be their seat or nature, may compress, either directly or indirectly, the spermatic vessels, and thus occasion varicocele. In the inaugural dissertation of M. Brixoux, published in 1837, a very interesting case is recorded in which the disease seems to have been produced by this cause. The patient, who had been operated on at la Charitie according to Velpeau's method, died in consequence of some other disease, which, upon dissection, was found to be a very large encephaloid tumor, situated in the left ileo-lumbar region, and compressing the vein of the corresponding testicle.

Inguinal and crural herniæ, whether congenital or accidental, may also oppose the venous circulation of the scrotum and of the cord, either by their direct compression upon the vessels, or by the manner in which they diminish the internal abdominal ring. The same effect may result from swelling of the lumbar ganglions, from scirrhous tumors along the spermatic cord, from hydrocele, and other kindred affections.

Hypochondriasis and melancholy have been enumerated as causes of varicocele; but without, as our author thinks, sufficient reason. The same is true of what Sir Astley Cooper says about the fatty accumulations of the omentum and mesentery, which, by compressing the spermatic vessels, interrupt, he supposes, the return of blood to the abdomen. According to Landouzy, considerable mischief occasionally results from the wearing of ill-constructed trusses, improperly applied suspensory bags, tight waistbands, or even tight pan-

taloons; at all events, there is reason to believe that if the disease is not thus induced, it is frequently kept up, increased, or aggravated.

We have already alluded to masturbation and venereal excesses as so many causes of the disease under consideration; and there can be no doubt that they are much more frequently concerned in its production than is generally imagined. Indeed, we are fully persuaded, from considerable experience, that this is the case. How these causes act in developing this affection admits of ready explanation. Their tendency is not only to determine an abundant afflux of blood to, and consequent congestion in, the genital organs, but to produce more or less fatigue in the muscles of those parts, especially in the cremaster and dartos, together with a loss of nervous innervation, which diminish their power and contractile energy. The testicle being thus insufficiently sustained sinks down, by its own weight, into the scrotum, which, with the spermatic vessels, is thereby kept in a state of constant relaxation. Heat acts in a similar manner, and produces similar results. Hence varicocele is much more frequent in hot than in temperate climates.

Finally, varicocele appears to be occasionally hereditary. Professor Blandin, of Paris, in an able article on this disease, in the "Dict. de Medicine et Chirurgie Pratiques," refers to three brothers with whom he was personally acquainted, who were all exempted from military duty on account of the existence of this malady: the father was similarly affected. An analogous case is mentioned in an inaugural dissertation published at Paris in 1837.

The next topic commented upon is the co-existence of varicocele with other affections, especially varices of the inferior extremities. In fifteen cases, in which careful inquiry

was made in reference to this point, the occurrence was noticed only once. On the other hand, in twenty-one persons affected with varicose enlargement of the legs, the spermatic veins were found to be perfectly free from disease. These data, although insufficient, would lead us to conclude that there is rarely any connection, and then not necessarily so, between the two maladies in question. The same is true of hemorrhoids.

We now come to speak of the symptoms and progress of varicocele. In the early stage, the affection is generally announced by a sense of weight in the testicle, extending to the groin or even the lumbar region; unusual pain and dragging in the course of the spermatic cord, and elongation of the scrotum, which is soft, pendulous, and apt to increase very much in bulk from heat or long walks. Another circumstance which is remarked at this period, is the frequent handling of the parts by the patient, to place them in a more favorable position, and to support them the better by means of his clothes. As the disease progresses, exercise becomes painful, the patient is easily fatigued, the features are visibly altered, the surface is bathed with perspiration on the slightest exertion, and the affected organ has to be constantly supported by a suspensory bag. The pain, which is commonly of a dull, aching character, often extends to the back and kidney; in some instances colic is experienced; in others, there is a sense of weight in the anus; and in one patient, observed by M. Landouzy, the penis was affected with smarting sensations, attended with scalding in discharging his urine. Another symptom, which the author says is never wanting, and which writers have hitherto neglected to mention, is a remarkable increase of the cutaneous secretion of the scrotum of the affected side.

When fully developed, the disease presents itself under the form of a soft, fluctuating, knotty tumor, extending from the upper border of the testicle to the inguinal ring. The enlargement has neither the regular outline and elastic feel of hydrocele, nor the firmness and globular aspect of sarcocele, nor the compact consistence of inguinal hernia. In case it is very voluminous, it usually occupies the whole of the left side of the scrotum, from the base of the external ring. The subcutaneous veins, under these circumstances, are unusually distinct, forming a very prominent superficial net-work. Indeed, it not unfrequently happens that the vessels which are ramified over the surface of the scrotum equal in volume the femoral vein of the adult, as in one of the cases mentioned by our author.

As to the spermatic veins themselves, they frequently acquire nearly as large a volume, forming a mass which may be justly compared to a bundle of irregularly rolled up cords, to a cluster of earth-worms, or to the intestines of a chicken. On percussing the tumor attentively, we perceive very distinctly that it contains more vessels than in the normal state, and that it is difficult to distinguish the vas deferens in the midst of the inextricable net-work. Some of the vessels present the feel of membranous tubes, with soft fluctuating parietes, while others are quite hard, owing to their being partly obliterated or filled with coagulated fibrin.

Although the symptoms of this disease are usually well marked, yet it is sometimes liable to be confounded with other lesions. The affection for which it is most apt to be mistaken is inguinal hernia, especially that variety of it in which the omentum is concerned. The best way in such cases is to place the patient on his back, and hold up the scrotum until the vessels are entirely emptied of their con-

tents; the finger is then applied against the external ring, and the patient requested to rise, when, if the disease be varicocele, the spermatic veins will immediately refill, whilst, if it be hernia, the bowel will be unable to descend.

The progress of this disease is usually slow, years elapsing before it occasions much suffering or inconvenience. In some instances, however, it increases with great rapidity, and gives rise to severe local disturbance, with more or less constitutional derangement. One of the most serious and unpleasant effects from this disease is atrophy of the testicle and epididymis, produced evidently by the pressure of the enlarged veins by which these organs are surrounded, as well as by those which enter into their composition, and which, in the more severe forms of the malady, are usually much increased in size. Celsus, it would appear, was already fully aware of this fact, which has been particularly noticed since by Pott, Callisen, and other surgeons. In thirteen of the cases recorded by our author, the left testicle was found to be more or less atrophied in nine. Occasionally, though rarely, this lesion exists simultaneously on both sides. In either case, it is generally attended with a gloomy and melancholy state of the mind, sometimes bordering upon alienation. Of this, the writer of this article has witnessed several instances.

It is seldom that opportunities are afforded for dissecting the parts concerned in varicocele. It is to be regretted, therefore, that the older surgeons, who were in the habit of extirpating the spermatic veins, or even of performing the operation of castration, for the relief of this disease, have left us no positive information respecting the pathological anatomy of it. Sir Astley Cooper, indeed, is almost the only writer who has said any thing on the subject. "On dissection," he observes, "all the veins are found to be dilated, and to have

undergone such a degree of elongation, that the one situated along the course of the vas deferens descends much lower than even the testicle itself, which is thus placed, as it were, in front of it. It follows, moreover, from this elongation, that a considerable portion of the varicocele passes below the level of the organ in question. At the same time that these vessels are distended and rendered varicose, their coats are thickened to enable them to sustain the increased column of blood; or rather, this thickening is produced by the greater quantity of blood which flows in their *vasa vasorum.*" In several cases in which we have carefully examined the condition of these vessels after death, we found them to be greatly convoluted, knotty, harder in some places than in others, and irregularly dilated, many of them being more than ten times the ordinary volume. Their parietes were very thick, dense, and rigid, almost of the nature of fibro-cartilage, at some points, and very much attenuated, soft, or rather brittle, at others. In cases of long standing, some of the veins are completely obliterated by adhesive inflammation, or by the formation of fibrinous concretions, imparting to the finger the sensation of so many solid bodies, pieces of cat-gut, or whip-cord.

Having described the seat of varicocele, together with its causes, its symptoms, and its nature, the author at length arrives at the treatment, which he divides into palliative and radical. Regarded until recently as incurable, or as beyond the reach of any surgical operation, temporary relief was all that was ever looked for by the practitioner. This consisted chiefly in the wearing of an elastic suspensory bag, in the use of cold lotions, either simple or slightly astringent, to the scrotum night and morning, and in the strict avoidance of every thing calculated to favor a determination of blood to

the spermatic vessels. To obtain full advantage from this treatment, the patient should refrain from dancing, horseback exercise, fatiguing walks, warm bathing, venereal indulgences, and protracted standing; which, as we have already seen, are so many causes of the malady under consideration.

In slight cases, this plan of treatment will doubtless answer very well; but when the disease is fully developed, progresses with unusual rapidity, is attended with much suffering, or threatens the destruction of the testicle, a radical cure is demanded. For this purpose various operations have been devised. With some of the ancients the actual cautery was a favorite remedy, especially when the affected veins were seated superficially; if, on the other hand, they were far removed from the surface, they first tied and afterwards extirpated them; an operation still resorted to by some of our modern surgeons. Gooch and other writers have reported cases of varicocele in which the suffering was so constant and intolerable, that nothing but castration could afford the patient any relief. In this country the spermatic artery has been repeatedly tied for the cure of this disease. The operation, we believe, was first performed in 1821 by Dr. Jameson, of Baltimore, who published an account of it a few years afterwards in the American Medical Recorder. In none of the cases in which he executed it did the patient suffer any inconvenience, either in regard to the integrity of the testis, or as respects the exercise of its functions. It is proper to state, however, that the operation is not only difficult of performance, but that it occasionally fails. Varicocele has also been cured by tying the spermatic veins. Successful cases of this operative procedure have been reported by Professor J. C. Warren, of Boston, and Dr. Stephen Brown, of New York.

Excision of the spermatic veins is another expedient which

is sometimes resorted to for the cure of obstinate varicocele. Professor Warren, who seems to prefer this operation to all others, states that he has repeatedly executed it, that it always affords great relief, and that he has never found it necessary to repeat it. Whether others have been equally successful, we have no means of determining. To perform this operation the patient should be placed on his back, and the external parts carefully shaved. An assistant holding the vas deferens between his thumb and forefinger, the surgeon makes an incision from an inch and a half to two inches in length over the most prominent part of the tumor down to the veins which, bursting through the opening, are now to be seized with the forceps, and divided with the knife or scissors, at the upper and lower angles of the wound. The bleeding frequently ceases spontaneously; but should it be necessary ligatures are to be applied to as many orifices as may require them, when the edges of the wound should be approximated by one or more stitches and closed with adhesive plaster. In one instance, in which this operation was performed by Dr. Warren, a large quantity of blood was extravasated into the cellular substance of the scrotum, followed by inflammation, extensive sloughing, and loss of the testicle.

The best method, however, of effecting the radical cure of varicocele, according to our author, is that proposed by M. Breschet, of Paris. It is founded upon the anatomical arrangement of the part, that is, upon the facility with which the varicose vessels can be isolated from the spermatic artery and vas deferens, and afterwards compressed, so as to obliterate their caliber. This is effected by means of a forceps with flattened plates, which are worked by a screw. The pressure is applied in a gradual manner, but with sufficient force to destroy the life of the scrotum and of the affected ves-

self. The instrument is usually removed in from six to eight days; in the meanwhile the patient is kept on his back, cold lotions are applied to the scrotum, and the case treated upon general principles. When the slough is detached, the edges of the wound are approximated by adhesive straps, and the person is permitted to walk about. "The radical cure of varicocele," observes the author, "is thus obtained with the greatest certainty and without the slightest danger to the patient." In this way, M. Breschet is said to have operated successfully in more than one hundred cases, a number of which were witnessed by M. Landouzy, and are minutely detailed in the present essay. The average period required for a complete cure is twenty-three days.

Whether the method of Breschet, so much vaunted by our author, is really entitled to the praise which has been bestowed upon it, further experience alone can determine. In this country, it has not been sufficiently tried to enable us to form any opinion in regard to its value. The operation, it strikes us, must be exceedingly painful, so much so, as to prevent the majority of persons affected with varicocele from submitting to it, excepting as an ulterior resort. In speaking on this subject, Dr. Warren observes: "I have not been able to prevail with patients to keep on the screw long enough to effect the object wished for. The last to whom it was applied took off the screw a short time after its application, walked out of the hospital, and has not been heard of since."* A similar remark has been made by others.

It will not be necessary, after what has been said respecting the different operations that have been devised for the relief or radical cure of this disease, to describe the different methods of Velpeau, Davas, Fricke, Grossheim, and Rey-

*Surgical Observations on Tumors, p. 439: Boston, 1837.

naud, more especially as they must all be regarded, at least to some extent, as so many modifications of the plan proposed by M. Breschet. We shall, therefore, conclude the present notice by inserting an account of the operation of the late Sir Astley Cooper, which, on the whole, we prefer to any that has yet been suggested, especially when, as often happens, there is great relaxation of the scrotum, on a partial removal of which it is founded. The mode of performing it is as follows: "The patient being placed in a recumbent posture, the relaxed scrotum is drawn between the fingers; the testis is to be raised to the external ring by an assistant; and then the portion of the scrotum is removed by the knife or knife-scissors; but I prefer the former. Any artery of the scrotum which bleeds is to be tied; and a suture is then made to bring the edges of the diminished scrotum together. The patient should be kept for a few hours in the recumbent posture, to prevent any tendency to bleeding; and then a suspensory bag is to be applied, to press the testis upwards, and to glue the scrotum to the surface."*

"It is of no use," adds Sir Astley, "to remove a small portion of the scrotum, for from doing this I have failed. When the wound has healed, the varicocele is lessened, but not always entirely removed; but the pain and distressing sensations cease, if sufficient of the scrotum be removed." The operation is not painful, nor is it followed by any constitutional irritation. The intention of it is, as the reader will at once perceive, to afford a permanent support to the enlarged vessels, rendering it thereby unnecessary for the patient to wear a suspensory bandage.

S. D. G.

*Dunglison's American Medical Library, p. 301: Philadelphia, 1839.

ART. II.—*Manuel de Medicine Operatoire, fonde sur L'Anatomie Normale et L'Anatomie Pathologique. Par* J. F. MALGAIGNE, M. D.

Manual of Operative Surgery, founded on Healthy and Morbid Anatomy. By J. F. MALGAIGNE, M. D.; 18mo., pp. 773. Paris: 1837.

This is one of the numerous manuals which have been issued by the Parisian press, within the last twelve years, on the different departments of medical science; and judging from an attentive examination of its contents, we are disposed to believe that it is quite equal, if not superior, to any of those that have preceded it. M. Malgaigne is well known in France, not only as an able writer, but as an excellent teacher, being attached to the Parisian Faculty of Medicine as *under-professor* of surgical anatomy and operative medicine. The first edition of the present work was published about seven years ago, and although it was by no means small, scarcely two years had elapsed before it was completely exhausted. Soon after its appearance in Paris, it was reprinted in Belgium and translated into the German language; flattering proofs of the estimate placed upon it by the physicians of other countries. In addition to his manual of operative medicine, he is the author of an able dissertation on uterine polypes, of a memoir on a new theory of the human voice, of an essay on the best method of treating lachrymal fistules, of Clinical Souvenirs of the St. Louis Hospital, and finally, of a treatise on surgical anatomy. The latter work, which was published a few years ago, will be noticed more fully in a future number of the journal.

In this edition the author has carefully corrected the errors of the first, and, besides a great many facts and observations

introduced into the text, several new articles are added to the work. Indeed, the manner in which he has executed his task is highly creditable to his talents; and his manual may be safely referred to as presenting an accurate outline of the existing state of the science of which it treats. The subject is not, of course, so elaborately discussed as in the celebrated work of Professor Velpeau, because M. Malgaigne has written more particularly for the use of students and the younger members of the profession, and has therefore confined himself within much narrower limits; he has furnished rather a miniature than a grand picture, in which all the features are fully delineated, or set forth in their just proportions. In the composition of his manual he has availed himself freely of the various and accurate information embodied in the writings of Sabatier, Lisfranc, Mayor, Ducamp, Amussat, Percy, Dupuytren, Senn, Velpeau, and others, besides the most important periodical literature of the day. Every operative procedure, no matter by whom devised, improved or modified, is carefully described, and in every instance, at least so far as we are enabled to judge, referred to its appropriate author. In this respect, ample justice has been done to the surgeons of every nation, and, as might be expected, those of the United States are by no means over-looked or neglected. The name of Dr. Mott, known in every portion of the civilized world, not only figures in the preface, but occurs in connexion with some of the boldest operations that have ever been performed on the human subject; that of Physick is also duly noticed; and so are several others of minor note.

As the work of M. Malgaigne is strictly elementary in its character, it would be impossible to present any thing like an analysis of its contents; we shall, therefore, conclude our notice of it with a translation of his remarks upon hydrocele,

which have been selected at random, to afford the reader some idea of the manner in which his task has been executed.

"Hydrocele may be divided into several species, namely: first, into *hydrocele by infiltration*, which is nothing else than œdema of the scrotum, and which demands no particular operation for its removal; secondly, into *encysted hydrocele*, which consists in the development most frequently of one or more cysts along the course of the spermatic cord, and which requires the same treatment as similar diseases in other parts of the body; thirdly and lastly, *vaginal hydrocele*, which is seated in the vaginal tunic, and presents itself in several forms. Thus, the tumor may communicate with the peritonæal cavity, as happens when the canal originally existing between these two sacs is not obliterated: in this case the disease forms what is termed *congenital hydrocele.* Again, the vaginal tunic, instead of presenting its ordinary character, may be thickened, lardaceous, cartilaginous, or even osseous; the testicle itself may be altered, and so constitute hydro-sarcocele; in short, the malady may be complicated with varicocele, hernia, and other affections.

1.—*Hydrocele in the Adult.*

"Besides local applications and blisters to the scrotum, to promote the absorption of the effused fluid, numerous operative procedures have been recommended for the cure of this disease, which may be thus stated: puncture, incision, excision, cauterization of the sac, the introduction of the seton or other foreign bodies, and lastly, injection.

I. *Puncture.*—This operation may be performed either with a small trocar or a lancet, the former being preferable.

The integuments should be previously put on the stretch and drawn away from the testicle. The patient sitting on a chair or lying upon the edge of the bed, the tumor is grasped with the hand, so as to make the anterior and inferior part of it project between the thumb and forefinger, while the upper and back part, corresponding to the cord and testicle, is concealed in the palm of the hand. The trocar is then to be plunged from below upwards through the antero-inferior part of the tumor, if we adopt the method of Sabatier, or upwards and slightly backwards, if we follow that of Boyer; the perforator being now withdrawn, the canula is pushed on until we have reason to believe that it will not escape from the vaginal tunic during the evacuation of the fluid. If this precaution be neglected, the fluid might be extravasated into the cellular tissue of the scrotum.

II. *Incision.*—The patient being placed upon his back, the surgeon, standing on the right side, stretches the integuments with the left hand, and with a convex bistoury makes an incision from above downwards in the direction of the longest diameter of the tumor. Arrived at the sac, he makes a slight opening into it, which is afterwards to be enlarged in the line of the external cut, by carrying the instrument upon the index-finger or upon a grooved director. The operation being completed, the wound is filled with lint, which is to be kept in until suppuration is established. As a modification of this method we may mention that of Franco, which consists in an incision of about three inches in length, and the introduction of a *tent* of lint, charpie or sponge, steeped in rose oil. Its object, as in the preceding case, is to produce suppuration in the sac.

III. *Excision.*—Of this there are not less than four meth-

ods. In that of Douglas, the patient lying on his back as in the operation by incision, the skin of the scrotum is to be divided in such a manner as to form an oval flap, the great diameter of which extends from above downwards. This flap being dissected up and held out of the way, the sac is laid open in its whole length, after which it is dilated with the skin, and removed as far as the base of the spermatic cord. The edges of the wounds are next to be approximated, taking care, nevertheless, to interpose some charpie to promote suppuration.

The operation as performed by Boyer consists in making a superficial incision through the whole length of the anterior and middle part of the tumor, and in separating the skin from the vaginal tunic, the dissection being prolonged nearly to the point of reflection of the membrane over the testicle. Care should be taken not to cut away the cellular substance too closely to the skin, otherwise gangrene might ensue, and to avoid opening the sac before it is completely exposed. The separation being effected, the vaginal tunic is laid open through its whole length, and excised with a pair of scissors as near as possible to the testicle.

The third method is that of Dupuytren, who divides the skin like Boyer, or excises it like Douglas, according as it is necessary or unnecessary to raise a flap of integuments; the edges of the incision are then drawn back, by compressing them with the thumb and forefinger of the left hand, enucleating thus the testicle and vaginal sac. The operation is completed by opening the cyst and cutting it off with a pair of scissors.

The method of Kinderwood, the fourth and last that we shall mention, differs so much from the preceding that it may be regarded as a new operation. Having made a large puno-

ture in the tumor with an abscess lancet, a pair of dissecting forceps is to be introduced into the aperture, with which a small portion of the sac is seized, and snipped off with a bistoury or pair of scissors.

IV. *Cauterization.*—This is performed by applying upon the anterior and lower part of the tumor a bit of caustic potassa large enough to produce an eschar of the size of a franc piece. As soon as there is reason to believe that its action has extended to the vaginal tunic, it is to be carefully removed, and the part dressed with some simple unguent. In eight or ten days the slough separates; in from five to six weeks the vaginal tunic is said to exfoliate, and the cure is finally completed by the manner in which the membrane adheres to the testicle.

V. *The Seton and other Foreign Bodies.*—Pott's method. He made at first a puncture in the ordinary manner at the most dependent part of the tumor, with a trocar three lines in diameter. Through the canula of this instrument he next introduced a silver tube five inches long, to the upper part of the vaginal tunic, so as to be felt there; a probe, six inches and a half in length, having at one end a fine steel trocar, and at the other an eye, armed with a seton, was then conveyed through the latter canula, and brought out at the place already specified. This method seems to comprise the germs of M. Belmas' instruments for his operation for inguinal hernia.

Monro used to leave the trocar-canula in the part; others, however, substitute a piece of bougie; Baron Larrey employs a gum elastic catheter, and M. Reynaud a bit of hemp, with injections, &c.

VI. *Injection.*—As the manner of performing this operation is familiar to every intelligent practitioner, we deem it

unnecessary to translate the description of it by M. Malgaigne. Three accidents are enumerated as liable to attend this method: 1st. It sometimes happens during the operation that the canula slips out of the vaginal tunic, thus allowing the fluid to pass into the cellular substance of the scrotum. This accident, which can always be avoided by proper care on the part of the surgeon, is of a serious character, as it is liable to be succeeded by gangrene, unless the irritating fluid be immediately evacuated by free incisions. 2nd. The point of the trocar occasionally wounds one or more of the branches furnished to the scrotum by the internal or external pudic arteries, the epigastric, or finally the spermatic. In most cases, however, these branches are so small that their lesion is not of much consequence. 3rd. The instrument may enter the testicle. This accident is also rare, and usually produces no other inconvenience than a slight pain."

The operation is occasionally followed by violent inflammation and suppuration; and in one instance the writer of this article knew it to be succeeded by fatal tetanus. The patient, a stout, robust mechanic, about twenty-six years of age, whom he saw twice in consultation, was doing apparently very well during the first eight days after the operation; at this time, owing to exposure to cold, symptoms of the disease in question manifested themselves, and in less than twenty-four hours the man expired. Upon examination after death the vaginal tunic was found considerably thickened, and its cavity containing several ounces of sero-sanguinolent fluid with a small quantity of unhealthy looking pus. No adhesion had taken place between the opposite sides of the sac. A case of a similar kind is alluded to by Sir George Ballingall, in the second edition of his admirable "Outlines of Military Surgery," published at Edinburgh in 1838.

On the whole, our author seems to give injection a decided preference over the different methods we have described. When this operation, aided by compression, fails, I would suggest, he says, an attempt to obliterate the vaginal tunic by puncturing it with pins, as M. Bonnet does the sac in cases of hernia. He does not state that he has tried this plan, but thinks analogy warrants the belief that some good may be expected from it.

2. *Congenital Hydrocele.*

"The communication between the vaginal sac and that of the peritoneal forbids, for the most part, the employment of the procedures pointed out as applicable to ordinary hydrocele.

Viguerie's Method.—The patient lying on his back, the surgeon pushes the contents of the vaginal tunic into the abdomen by a sort of taxis, and applies upon the inguinal ring a herniary bandage or truss, which thus closes it up and prevents the fluid from re-descending.

Method of Desault.—This consists in puncturing and injecting the congenital hydrocele. Thus contrary to Viguerie, Desault forces the fluid as much as possible into the vaginal tunic, punctures the scrotum in the ordinary manner, and then, having ascertained that the intestine is fairly within the abdomen, he directs a trusty assistant to compress the external ring by means of a small pad, while he throws in the injection as in common hydrocele. To prevent any of the fluid afterwards from entering the peritoneal cavity, or the abdominal viscera from protruding, a truss should be worn until the cure is completed.

Of these two methods that of Viguerie is the more simple,

as well as the less dangerous, and ought therefore to be preferred. Even the advanced age of the patient does not preclude the hope of a speedy obliteration of the ring. The methods of MM. Belmas and Gerdy, but above all that of M. Bonnet, for the radical cure of hernia, are likewise perfectly applicable here."

Such, to use a mercantile expression, is a fair sample of the work before us. Embracing the whole field of operative surgery, or, as the French term it, operative medicine, the accounts of the various mechanical procedures must necessarily be very brief, and, in many instances, imperfect. Hence one great objection to these manuals is, that they are calculated rather to mislead the student than to guide him to what is truly useful; in other words, their inevitable tendency is to create confusion and embarrassment as to what should be selected or what rejected. Many of the operations described by M. Malgaigne are no longer performed by the best surgeons, and they should therefore have been excluded from a work professing to be strictly elementary. Still, with all its blemishes, it is a very good production, which both the student and the practitioner may consult with advantage.

S. D. G.

ART. III.—*J. F. Henkel's Anleitung zum Chirurgischen Verbande. Umgearbeitet und mit vielen Zusatzen versehen von Dr. J. C. Stark. Von neuem bearbeitet und mit Zusatzen vermehrt von J. F. Dieffenbach, M. D.*

An Introduction to the Methodic Application of Bandages. By J. F. HENKEL, M. D. With forty copper-plates. 12mo. pp. 540. Vienna: 1840.

The first edition of this work was published in 1756, under the title of "Instructions for the Methodic Application of Sur-

gical Bandages," in a small duodecimo volume, and has ever since been the standard authority for reference with German students. The fifth edition, greatly improved and enlarged, was issued in 1790, a short time before the author's death. It reappeared in the early part of the present century with emendations and copious additions from the pen of Dr. Stark; and the edition now before us was published a year ago by Dr. J. F. Dieffenbach, of Berlin, well known as one of the most distinguished surgeons of the age. The text, which is closely printed, embraces five hundred and forty duodecimo pages, and is illustrated by forty plates, executed on copper in the best style of the art. That this work should have sustained itself for nearly a century in the estimation of our German brethren, is not only a striking evidence of its intrinsic value, but an anomaly in the history of medical authorship. This is the more surprising when it is remembered that the amount of competition in this department has by no means been slight; for, besides the essays of Kühn, Hofer, Zauner, Bernstein, Theden, Bottcherr, and Kohler, which all appeared within a very short time of each other, towards the close of the last century, the elaborate manuals of Schreger of Erlangen, and Benedict of Leipsic, which were issued, the one in 1820 and the other in 1827, have had an extensive circulation, and are justly regarded as among the most valuable contributions to surgical science within the last twenty years. About the same period also that the latter work appeared, a translation of the celebrated production of M. P. R. Gerdy of Paris—"Traite des Bandages et Appareils de Pensemens"—was published at Weimar, with copious notes by the German editor. Thus it is evident, as was before intimated, that the treatise of Henkel could have maintained its character as a standard authority, during the long period above mentioned,

solely by its intrinsic excellence, and not because of an extraordinary concurrence of circumstances; though doubtless not a little of the reputation which it at present enjoys is to be ascribed to the valuable additions of its two editors, Stark and Dieffenbach.

As it now presents itself, Henkel's "Introduction" affords a complete digest of the existing state of the art of bandaging, and may be considered as the most able production of the kind in any language. It is far superior to the little treatise of Mr. Cutter, and should be in the library of every intelligent surgeon. It is worthy of being well translated, and would doubtless be highly acceptable to the practitioners of this country, to whom we can safely recommend it as a useful and satisfactory guide.

S. D. G.

BIBLIOGRAPHICAL NOTICE.

The Dublin Dissector, or Manual of Anatomy, &c. &c., together with the Elements of Pathology. By Robert Harrison, A. M. M. B. T. C. D. &c.; with additions by Robert Watts, Jr. M. D., Professor of Anatomy in the College of Physicians and Surgeons in the city of New York. 12mo: pp. 541. New York, Philadelphia, and Boston: 1840.

The above forms the title page to a work which we have recently met with, and which, we believe, is the fourth edition of the "Dublin Dissector" that has issued from the American press.

In so far as the text is purely a descriptive anatomy, we have always considered it one of the best dissecting room manuals which we possess—that the arrangement is very

well adapted to the convenience of the student, presenting as it does, a description of the different parts in the order in which they are met with on dissection—and that the style is perspicuous, and perhaps not too prolix for the patient laborer. But candor compels us to add, that we consider those parts of the work referred to as "Elements of Pathology," as superfluous and burdensome. At the table, the student wants a description of the parts which he is dissecting, as concise as is compatible with perspicuity; and any attempt to draw the mind from what should be the special and exclusive objects of his study at the time, by giving an account (however short) of the different accidents and morbid changes to which they may be liable, serves only to produce confusion, by multiplying the objects of attention. If he be systematic in his labors, he wants to study *Healthy Anatomy* alone in the dissecting room; and give Surgery and Morbid Anatomy his whole attention at other times.

The additions which the American editor has made, consist in a classification of the muscles, according to the parts on which they act; which, we think, will greatly tend to "impress upon the minds of students their number, situation, and functions"—in an account of the weights and measures of the different organs; which is perhaps the most valuable "addition," unless it be the "varieties" of the arterial system—in the "varieties" of the muscular, arterial, and venous systems —a list of the muscles arising from, and inserted into, each individual bone, in connection with its description—an enumeration of the various fractures to which the bones, and dislocations to which the articulations, are liable—and an extension of the "Elements of Pathology." Against these latter may of course be urged the same objection that was mentioned in reference to the text. The parts of the book, however, which we deem objectionable, do not so materially detract from its value, but that we consider it, all in all, one among the best works that we have upon the subject.

G. W. B.

Selections from American and Foreign Journals.

On a New Species of Torticollis. By M. Bouvier.—This species of torticollis differs altogether from the acute or chronic muscular form, and from the spontaneous luxation of the atlas and axis, three states with which it has been confounded. It has its seat in the articulations of the first cervical vertebræ, and may perhaps be designated by the term articular torticollis. The lateral articulations, right or left, of the first cervical vertebræ, and especially of the atlas with the axis, are, so to speak, the focus of articular torticollis, which consists in a peculiar form of inflammation of the synovial capsule and fibrous tissues of these articulations. The essential characters are: 1. A position of the head and neck, similar to that produced by contraction of one of the sterno-cleido-mastoid muscles, namely, lateral flexion to the right or left, and rotation of the face to the opposite side. 2. A pain felt towards the top and sides of the nape of the neck, sometimes on the lateral and posterior parts of the cranium; arising spontaneously, or in the movements of the neck. 3. Complete relaxation of the sterno-cleido-mastoid of the affected side, and an equal tension of the muscles of the neck both left and right. 4. Stiffness and pain in all or any of its movements, notwithstanding the preservation of the articular connexions of the cervical vertebræ, and the integrity of the muscles. 5. Absence of swelling, and of sensibility on pressure. 6. Atrophy, or arrest of development of the side of the face, which answers to the inclination of the head, when this has lasted a certain time.

This disease presents two successive states or periods, the acute and chronic. It is often produced by cold, sometimes by sudden distension of the ligaments. M. Bouvier thinks it very important to detect this disease, as the section of the muscle would be useless and rash, but reserves to another occasion the proceedings which he has found useful.—*Brit. and For. Med. Rev., from l'Experience.* 17 *Septembre*, 1840. *Med. Exam., Feb.* 27, 1841.

KODAK S·AFETY

On a new method of Operating for the radical cure of Hernia. By M. VELPEAU.—The author of this memoir, after examining at length the various means hitherto employed for the cure of hernia, states that he finds none of them at all efficacious; he therefore determined to try another method. Convinced from repeated experiments that injections with tincture of iodine produced in the serous membranes an adhesive inflammation, slight and scarcely dangerous, he attempted the radical cure of hernia by these injections. Three patients were operated on by him in the years 1836 and 1837, but the difficulties of a first operation, and the vagueness of the results, still left him in doubt, and he afterwards employed a method in two cases consisting of three distinct steps: subcutaneous puncture, scarification of the interior of the sac, and compression. He took the idea of scarifications from the ancients, or rather from what he had himself advanced in the year 1832. Twice that year he had placed great confidence in them, and only discontinued their employment when he perceived that danger was likely to ensue to the patient from opening the sac. These dangers seemed no longer likely, when M. Guerin gave the hint of the possibility of penetrating to the bottom of the cavity, by a simple puncture of the integuments, and expressed in his memoir his desire of applying his subcutaneous incisions to the radical cure of hernia. M. Velpeau has performed the necessary scarifications in this manner. With regard to the compression, he applies it not only to the external abdominal ring, but over the internal ring, and in the inguinal canal itself. He employs the celebrated bandages of M. Fournier of Lempdes, which he states have more than once sufficed for the radical cure of hernia.

M. Velpeau successfully operated on a patient in the following manner: Having introduced the index-finger for some lines in depth into the external abdominal ring, he pushed the integuments before it, and passed a sort of lancet over the nail of this finger, pushing it obliquely as far as the iliac fossa; then withdrawing his finger from the ring, he brought the edge of the instrument against the iliac walls of the abdomen, which he supported with the other hand, and then scarified them in various directions, taking especial care to avoid the epigastric vessels. The lancet was then withdrawn at the exact spot where it had entered, and the operation was complete, only a few drops of blood having been lost. The patient was taken to bed, no accident occurred, the small wound cicatrized by the next day, the bandage of Founier was applied on the third day, and the man has since walked and conducted himself as if he had never been afflicted.

Encouraged by this result, the patient demanded a similar operation on another hernia. It was performed, and at the end of ten days he was convalescent. He has since continued quite well, and has remained as a cook in the hospital to show the radical cure to the profession.—*Ibid. From Bulletin General de Therapuetique.* 15 *et* 30 *Aout*, 1840. *Ibid.*,

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Rhinoplastic and Cheiloplastic Operations. By J. Pancoast, M. D., Professor of Anatamy in Jefferson Medical College, one of the Surgeons of the Philadelphia Hospital, &c.—Jno. Glover, æt. 50, a native of Bridgewater, in England, lost, seven years ago, as he states, by phagedenic ulceration, all the soft parts of the nose, the whole of the upper lip, the turbinated bones and septum of the nostrils. Though now in good health and robust, he appears an object of deformity so disgusting to himself, that he has voluntarily exiled himself from his family and home. On examination it was found that the teeth with their sockets had all disappeared from the upper jaw, and nearly all from the lower; a small strip of gum, a quarter of an inch wide, stretched across, and formed the only separation between the lower lip and the ends of the ossa nasi.

In consequence of the destruction of the upper lip and the sockets of the teeth, the chin came high up on the face, and the lower lip fell on the margin of the nasal cavern.

The cicatrization following the destruction of the upper lip and nose, had drawn in the angles of the mouth, so as to leave a round opening of not more than three quarters of an inch in diameter when the mouth was opened to the widest extent.

Jan. 20th, an operation was performed before the class of the Philadelphia Hospital, for the enlargement of the mouth and the reconstruction of the upper lip. The mouth was widened after the manner of Dieffenbach, for about five-eighths of an inch at each angle, by removing a slip of the muscle and integuments in front of the mucous membrane, and then dividing the membrane in two, and binding each half by suture over the raw edges of the new lip. A flap of integument was then raised from the muscles of each cheek, an inch in breadth and an inch and a half in length, and brought down and fastened together by hare lip suture in front of the gum, which had been previously made raw with the knife. The operation succeeded. The new lip became

perfectly adherent to the gum, and presented a natural appearance.

March 27. Proceeded to the Rhinoplastic part of the operation. A flap of the integuments was raised from the forehead, nearly of a pyramidal shape, three inches long and three inches broad at the base, having an adherent strip raised from the scalp on the middle line an inch and a half long and five-eighths of an inch broad, to form the columna of the new nose. The flap was dissected up, remaining attached only by a pedicle between the eyebrows, and twisted so as to present its raw surface over the opening of the nose. The integuments of the forehead and scalp were then brought together with hare lip sutures, leaving only a small opening to fill up by granulation, the size of a twenty-five cent piece. A grove was cut along the sides of the nasal cavern into which the flap of the new nose was stitched. The new columna from the scalp was bent in, and fastened with hare lip pins to the upper margin of the gum, and the new lip formed on the 20th of January, and which were freshened with the knife for its insertion. The entire operation lasted a little over an hour, and was borne by the patient without a murmur. 31st. The dressings were removed, the wound in the forehead and scalp were found united, except in the middle space, by first intention. The new nose and the column had also united every where by first intention, and retained in a great degree the natural prominence. The patient suffered but little pain or inconvenience since the operation, and has the fairest prospect of having his hideous deformity entirely removed. The details of this case will be hereafter more fully given, as well as those of another case in which the operation was performed by Dr. Pancoast, on the 9th of January last. In the latter instance, the nose which had been lost by scrofulous ulceration, attended with a destruction of a considerable part of the hard palate, was rebuilt by flaps from the cheeks, and the operation has been so completely successful as to require a careful inspection to distinguish it from the natural organ.—*Med. Exam., April* 10.

Anatomical description of an Hermaphrodite, known by turns under the names of Marie-Dorothu Derier, and Charles Durge. By Professor MAYER, of Bon. Translated from the French, by O. H. PARTRIDGE, M. D., of Philadelphia.—This remarkable individual whom we are about to describe, has been known to the medical community for more than thirty

years, at first by the name of Marie-Dorothuú Derier, afterwards by that of Charles Durgé. Born at Berlin or Potsdam in 1780; he was baptized as a female child. At twenty years of age he still continued to wear the clothing and follow the occupation of females moving in the same grade of life; it was about this time that he was first spoken of in the public journals. Hufeland made mention of him in his journal for 1801; and notwithstanding the perspicacity of this patriarch in German medicine, he gave it as his opinion that the attributes of the female sex were predominant with Derier.

During the years 1816 and 1817, Derier, who had learned to model in wax, visited the different universities in Germany, and travelled into France, Holland, and England, where he was employed in most of the anatomical museums. He was examined by a great number of medical gentlemen and men of science; among whom were Kopp, Kansch, Marsina, Rosenmüller, Osainder, Lawrence, Green, and the faculty of medicine in Paris, the most of whom gave it as their opinion that he was of the masculine sex. Hufeland, whom we have already mentioned, Gall, and Brooks declared in favor of the feminine. While others, and among them Drs. Schneider and South, Schmitmüller and Ritgen, were of the opinion that Derier belonged to neither sex; the different parts of the body were considered as appertaining to the masculine and partly to the feminine. The pelvic basin only was considered by most of them as the basin of the female; notwithstanding, the anatomical inspection, as we shall see, has demonstrated to the contrary.

Supported by the opinions of a majority of physicians, who had pronounced him of the masculine sex, and stimulated by a sort of vanity, Derier assumed the dress and mode of living usual among men, and caused himself to be called Charles Durgé. Under this name he continued to live in Bon, from 1820 to the time of his death, which occurred in March, 1835. During the latter period of his life he was constantly under the observation of M. Mayer. Durgé, said he, was pleased to be in the society of males, but evinced a greater predilection for that of females, yet entertained towards neither of them any amorous propensities. His character was a *melange* of the man and the woman: on the one part, he had courage unusual to one of his size—he possessed great physical strength, and loved to rule; and, on the other, distinguished himself for great manual dexterity, as his works in wax were always well and faithfully made. He was animated with sentiments mild and affectionate, yet at the same time possessed a certain spirit for contradiction.

During the last years of his life there was no evidence of a catamenial discharge from the genital organs, as there had been two or three times during his twentieth year, yet he was subject to epistaxis and hæmorrhoids, phenomena which were attributed to his manner of living, as he indulged freely in the use of wine, coffee, and spirituous liquors. Durgé never had pollutions or ejaculations of semen. His voice became more hoarse and strong as he advanced in age; his beard was light and thin; all his hair had fallen off, with the exception of a few locks that hung long and pendant from behind the occiput. His head and face presented the aspect of an old woman; the teeth also were nearly all gone; neck short; chest fat and rotund; arms and legs slightly covered like those of the female; his height, which was taken at the time he was thirteen years of age, when he had arrived at his full stature, was five* feet. At thirty-eight there was a complete change in his constitution, and he became very gross and portly; he enjoyed most excellent health, with the exception of a nervous fever, which attacked him when he was about forty years old. He continued thus to live until three years previous to his death, when his memory failed, and he lost all taste for his works in wax. In the month of March, 1835, his countenance assumed a haggard aspect for a number of days, at the end of which Durgé or Derier succumbed suddenly of a violent attack of apoplexy. The autopsy was made by Professor Mayer, one of the most distinguished anatomists of Germany. M. Mayer was exceedingly minute in his examinations, which might have been thought by some unnecessary, had they not been justified by the importance of the subject.

We have thought it our duty to report faithfully the description of the professor in Bon, because it has thrown much light upon the true nature of an individual who had enjoyed a certain celebrity in consequence of the great difficulty that had existed to determine to which sex he belonged. It proves to us, moreover, that there does exist among the human species, true hermaphrodites,—that is, the organs male and female in the same individual.

Autopsy Exterior.—Length of the body 5 feet; length of the superior extremities from the condyle of the humerus to the end of the middle finger 2 feet 4½ inches; inferior extremities from the great trochonter to the heel 2 feet 10¾ inches.

*We here make use of the French measure, which the reader will recollect is a little longer than the English—12 French inches being equal to about 13 English inches.—*Tr.

Form of the head feminine, small, os frontis narrow and low; occiput prominent; hair thin, and covering only the occipital region; beard very thin; neck short; larynx slightly projecting; breadth of the shoulders 1 foot 2 inches; superior portion of the thorax narrow and short; abdomen of good length; breasts very well developed, but the nipples shrunk; pelvis not large; pubien arch of a medium width; curve of the arms and legs like those of the female.

Description of the Internal Organs.—Tongue short, large, and ovoid; papilla long and of a natural size; os hyoides small, but well developed; the thyroid cartilage forms but a slight projection, is very narrow, but of a tissue sufficiently hard throughout; thyroid gland quite large; cornua thyroidea, superior and inferior, very long; the ligaments of the thyroid and cricoid cartilages, strong and well developed; epiglottis short and large; cavity of the larynx moderately large, nevertheless, the vocal chords, superior and inferior, are sufficiently thick and strong; trachea narrow, and its cartilages more soft than those of the male. Lungs small; the right lung is divided only into two lobes by a fissure incomplete and not very deep; the left also is divided and adherent to the parieties of the thorax, the pericardium and diaphragm; the right lung, with the exception of a few arthritic tubercles of the size of peas, are healthy; the left contains a large number of these concretions, particularly on the internal edge of the superior lobe. Heart fat, large, round, and resembles the heart of a female; its structure is normal, and the muscular tissue well nourished; the division of its vessels from the arch of the aorta, natural. The stomach is of an oblong form and not very muscular. Spleen small, and only 2 inches 10 lines in length, and 1 inch 8 lines broad. Liver of a medium size, biliary ducts contain a large number of calculi. Intestinal canal normal; cœcum large; appendicula vermiformis large. Mamma tolerably well developed, the glandular granulations are wanting, but in their place are found a quantity of small globules, fatty, and of a reddish yellow appearance; the nipple projects but slightly, and is pierced by a great number of minute holes, which are evidently sebacious follicles, and situated only about the areola. Kidneys oblong, thin, and small; renal capsules normal.

The encephalon is small, and presents entirely the form and organization of that organ in the female; its form is round and symmetrically convex; lobes not prominent, convolutions numerous, but narrow; dura mater and pia mater are of an extremely delicate texture; pons varoli and medulla ob-

longata small; the nerves, and particularly the fifth pair, are more delicate than in the male; the cerebellum is also small, and its right hemisphere in particular is much less voluminous; in fact all the lobes appear to have been arrested in their development; the lamina are numerous; the cerebrum presents also a want of development in its right hemisphere, as is indicated by a depression at the lobes; corpus callosum short; thalami nervorum opticorum, corpora quadrigemina, pineal gland and corpora striata are below the natural size. *Cranium* small; its bones thin but solid; sutures not effaced, bones of the face tolerably well developed; ossa maxillaria superiora destitute of teeth; in the ossa maxillaria inferiora two molar and three incisors still remain; mastoid processes large and of a very firm texture; os frontis slightly projecting, but the summit of the cranium and the occiput which contain the posterior lobes are quite large; the prominences corresponding to the cerebellum, not well developed, the left salliant and the right quite smooth; vertebral column regularly formed, but the vertebræ, especially the cervical and thoracic, are of rather delicate texture; ribs brittle and thin; the 3d, 4th, 5th, 6th and 7th on the left side have been fractured, the four first in two places, the last in only one; the fractures now are consolidated and quite firm; the pleura adheres at three different points, and also to the lungs; the sternum, particularly its superior portion, is quite large; thorax uncommonly narrow, more especially its middle portion, while its lower section is also of good size.

The bones of the superior extremities are proportionally well developed, but present a feminine character, particularly the clavicle and scapula; the first is short, rounded, thin, and very curved—the fore-arm forms with the arm an angle from without, a little unusual; the hands are small like those of the female; lumbar vertebra rather small, sacrum large; sacro vertebral angle slightly prominent. The bones of the pelvis are strong and solid, and in general narrow, presenting in an evident manner the configuration of the pelvis of a male; its greatest transverse diameter from the crest of one ilium to the other is 9 inches; from the anterior superior spinous process of one ilium to the opposite it is 7 inches and three lines; transverse diameter of the superior strait 4 inches 5 lines; antero posterior 3 inches 4 lines; oblique diameter 4 inches; transverse diameter of the inferior strait 3 inches 3 lines; antero posterior 2 inches 6 lines; symphisis pubis long and narrow; the arch of the pelvis is like that of the male, and forms an angle of 65 degrees; the lateral portions of the

ilium have a vertical direction; cotyloid cavities are flat and turned forward; sciatic tuberosities look downward and inward; the whole of the pelvis is a little unequal and oblique, inasmuch as the right half of the small basin is smaller and more narrow than that of the left, and the sacro vertebral angle greater towards this side; osseous tissue of the inferior extremities very delicate; neck of the femur very short; trochanters feeble; knees a little crooked from within.

Description of the genital organs in particular.—Mons veneris slightly elevated; the hair that cover it are thinly scattered and do not extend as far as the umbilicus; perineum and anal region also only partially covered. Length of the penis to the glans two inches; the glans itself 9 lines; penis mostly covered by the mons veneris; corpus cavernosum equally well developed, presenting, each one, a perpendicular diameter of eight lines, and together a transverse diameter of four lines, divided by a septum; corpus spongiosum wanting; the prepuce covers but about half of the glans; a little on the under side is found an opening, *fossette naviculaire*, or small canal, which represents the canal of the urethra closed, and is formed of two folds of skin, stretched backwards, and which resemble the nympha; this small canal leads to an opening, round, and about the size of a goose quill; the external labia, the skin of which is wrinkled, forms the posterior edge of this opening, and the mucous tissue, smooth and glossy, its anterior; at the anterior or superior border are to be seen two longitudinal folds of skin, between which is a small canal representing the canal of the urethra, and runs in a direction inward; at the edges of the internal labia are also seen the vestiges of the carunculæ myrtiformis; the circular opening continues, with a vestibule of eight lines in length, and merges above into the canal of the urethra, and below into a larger canal which resembles a vagina; the septum that divides at this place the vaginal and urethral canals is semilunar in form, and is placed horizontally; the canal of the urethra is near the racine of the penis, and is at the same time surrounded by the prostate, which is firm, but not very thick; neck of the bladder, and the bladder itself, are regularly formed; the latter particularly is very muscular, and its membranes dense and strong; the mouths of the ureters present nothing singular. The canal which represents the vagina is composed of a delicate mucous tissue, and has but few muscular fibres, and is partially filled with a greenish mucous; at its commencement it is surrounded by a tissue, rectiform and vascular, and easily separ-

ated; this tissue is composed mostly of varicose veins, which continue upwards between the vagina and uterus, and finally disappear; at this place are seen a number of veins coming out, and a large artery entering. Length of the vaginal canal two inches eight lines; diameter of the external orifice, where it is the largest, ten lines; posteriorly, it is only six lines; in its internal surface anteriorly it is a little currugated,—farther back, smooth, but garnished with a great number of small warts, where are to be seen also radiated or star-formed cicatrices. The vagina terminates interiorly by a narrow portion or sort of isthmus of a spongy texture, and of from four to six lines in length; behind this isthmus, which represents the imperforate orifices of the uterus, is found the uterus itself, which continues upwards with the oblique direction of the vagina, behind and between the bladder and rectum, with a slight declination from right to left, so that its base is seen on the left side of the bladder, at the point of union between the body and base of this organ.

The uterus is extremely narrow; length two inches six lines; neck quite small, yet it is not difficult to distinguish that it has a neck, body, and fundus; there is nothing remarkable in the internal surface, except some small folds and a number of small spots of a yellowish brown color; its cavity, which contains a gelatinous mucous, is much narrower than that of the vagina, and will hardly receive a goose quill; its fundus is a little larger, and will measure nearly six lines; the body of the uterus exhibits a few currugations or folds, and a number of hydatiforme vesicles, mixed here and there with yellow spots.

The two Fallopian tubes open exactly at the fundus of the uterus, but in length are unequal; the left tube being three inches four lines, and the right four inches four lines; the tube of the canals is small, but perfectly permeable to the abdominal opening, which is imperforate, and where are discovered a number of hyatids; corpus Fimbriatum plainly to be seen; the muscular fibres are very strong which are given off from the fundus of the uterus, under the peritoneum, and which pass over its anterior portion and the bladder in a direction towards the inguinal ring, and finally are lost in the adipose tissue of the external organs. In the right side, near the open extremity of the Fallopian tube, is a small, flat, ovoid body, from which are given off a bundle of vessels and muscular fibres, and entirely enveloped in the peritoneum; its form is that of a small almond; its parenchyma is evidently composed of a yellow, soft, and filamentous tissue, resembling ex-

actly that of the testicle; the vesiculæ seminales may be easily dissected, and in the cord are to be seen the artery and vein. On the right side, behind and a little without the abdominal opening of the Fallopian tube, there is also a small, round, flat body enveloped in the peritoneum, but its tissue is gelatinous, and composed of small grains, so conglomerated as to resemble rather an ovary than a testicle."

We here see the mixed attributes of a male and female; on the one part a testicle slightly atrophied, also a penis and prostrate gland; on the other, a vagina and uterus with its Fallopian tubes, and on the left side a body analagous to an ovary. M. Mayer has also observed as a fact worthy of special notice, the very slight development of the hemispheres of the cerebellum, an anomaly that Gall predicted, when Derier or Durgè was twenty-five years of age, in consequence of the indifference exhibited by him for either sex. It is also a fact, that on the right side, where the cerebrum, and particularly the cerebellum, were imperfectly developed, there exists in the abdominal cavity but one thing doubtful, that is, the body which was supposed to be an ovary; while on the left side there is certainly a testicle, although not of full size.

Finally, M. Mayer adds, he never has observed this defect in the organization of the cerebellum in any other case of hermaphroditism, either in the male or female.

New method for the radical cure of Varix, and especially of Varicocele.—By M. Ricord. After pointing out the errors of believing that varicocele affects only persons of twenty or thirty years old, and imagining it to be a common consequence of gonorrhea or epididymitis, whereas in fact it is more generally a predisposing cause of the latter disease, and instead of being produced by it, is more often cured by it; M. Ricord proceeds to describe his mode of operation.

"The hair must be shaved from the genital organs on the side to be operated on, and the veins must be dilated by making the patient walk about a little, or by enveloping the scrotum for a few hours in hot poultices, or by fomentations. This being done (though if the swelling is at all times considerable these precautions are unnecessary) the vas deferens must be separated from the mass of veins, and the latter being taken up with a fold of the scrotum, a flat lance-shaped needle, armed with a double-looped thread must be passed beneath them. When the needle has been passed completely

through the skin from one side to the other, the veins are to be let go, the skin alone being now held up, and then a second needle, similarly armed, must be passed through over the veins, entering at the same hole by which the first needle was thrust out, and passing out at the same hole by which the first entered. The bundle of veins is thus fixed between two double threads, of which one passes over and the other beneath it. The ends of each double thread on each side are then to be passed into the loop of the other, and now, by drawing these ends in opposite directions, the vessels are tied beneath the skin. By this kind of ligatures the vessels may either be suddenly constricted or be tied gradually in a manner something like that adopted by M. Breschet, or most conveniently by a properly adopted *serre-nœud* after the fashion of a tourniquet.

"It is usually from the tenth to the twentieth day that the vessels are divided by this means, and their division may be easily recognized by the freedom with which the ligatures may be drawn from one side to the other, without being, as they were before, retained by the parts which they inclosed. It sometimes happens, that at the instant of the first constriction the patient suddenly feels rather an acute pain in the course of the spermatic cord; it is usually less severe than in the other operations for the same purpose; and though it often occurs at the successive constrictions, yet it has never been long continued, nor given rise to any accident. It is sufficient to keep the scrotum raised, to employ some anodyne frictions on the inguinal canal or the lumbar region, or to apply some emollient poultices, to effect its removal. Sometimes a slight œdema of the scrotum supervenes, and I have twice observed rather a considerable serous effusion in the tunica vaginalis. In one patient, also, who went out of the hospital and in a few days after the operation exposed himself to great fatigue, a slight abscess formed in the cellular tissue; but with these exceptions there has been no important accident.

"It must be clearly understood, that if the patient is strong and plethoric, he is to be bled from the arm directly after the operation; that the horizontal position must be maintained till the vessels are cut through; and that the bowels must be kept open.

"Twelve patients have now been operated on in this manner at the Venereal Hospital, and in all the most complete and satisfactory result has been obtained. The three last of them were presented at the Academy of Medicine; two completely cured, and the third, who was operated on only two

days previously, still wearing the ligature and the *serre-nœud*.

"I have employed the same method for varices of the legs. I have already operated on nine patients, some having simple varicose swellings, and others varicose ulcers. In some a single ligature was sufficient, in others as many as four were applied. In none have there occurred any symptoms of phlebitis; the varicose veins have been obliterated and the ulcers speedily cicatrised; and in one of the patients whom I saw six months after the operation, there was no relapse. Still, however, I do not think that this method is likely to be so successful in all cases of varices of the lower extremities as in those of varicocele."—*Bulletin Generale de Therapeutique. Mars*, 1840. *Maryland Med. and Surg. Jour. Vol.* 1. *No.* 4.

Congenital Dislocation of the Humerus reduced after sixteen years.—By M. GAILLARD, Surgeon to the Hotel Dieu, of Poictiers. The following is an abstract of a report to the Royal Academy of Medicine, drawn up by MM. Cannet and Bouvier. They consider the case as very curious, and without a parallel in the history of surgery.

Mademoiselle L. B. a few days after birth presented a deformity of the left superior extremity with much pain during its movements. The elbow was thrown from the body, the forearm semiflexed, and the hand in a state of pronation. During her infancy she could not bring her elbow near the trunk, nor raise her hand higher than the chin. The limb was often painful during her early years; but latterly the pain had only come on when the limb had been fixed in one position. When M. Gaillard saw her in 1836, she was sixteen years of age. He found in the posterior part of the shoulder a projection formed by the head of the humerus, which was placed in the subspinous fossa of the scapula, above the middle part of the spine, which was curved by the pressure it had undergone. On moving the arm, the head of the bone was felt rolling under the fingers, and it appeared abraded from rubbing on an irregular surface. The hand could not be brought to a state of supination. The forearm could not be extended on account of the permanent contraction of the biceps. Elevation and rotation of the arm were impossible.

On the 5th of January, 1837, the patient was placed on a stool, a cushion was applied to the external border of the scapula and maintained by two cords passing from its extremities and attached to two fixed rings. The arm directed hor-

izontally inwards was then submitted to the action of a weight of sixteen pounds. The weight was suspended at the end of a cord which passed through a fixed pully, and was attached to a bracelet fixed above the elbow. Time after time M. Gaillard increased the power of the traction, occasionally adding his efforts to the force exercised by the weights. The extension prolonged from twenty to twenty-five minutes was repeated on the 10th and 11th of January, each time bringing the head of the humerus nearer the glenoid cavity, and with no other inconvenience than a slight pain and swelling of the arm. On the 13th the head of the humerus was more moveable. Further traction was employed, the arm being always placed horizontally. The humerus yielded, glided over the scapula for the space of an inch and a half, and approached the glenoid cavity. M. Gaillard then seized the elbow, and by carrying it backwards and upwards he directed the head of the humerus downwards and forwards, then lowering the limb he felt the head pass under the acromial arch, and leap over a projection which appeared to belong to the articular cavity. The arm was now in contact with the trunk, it was sensibly lengthened, and all its movements could be executed with ease.

The dislocation, however, occurred again and again, and was as often reduced. The difficulty was to maintain the bone after reduction. This, however, was effected by careful bandaging. The patient suffered considerable pain at times, but was relieved by the application of leeches. From the first reduction to the entire cessation of pain, a period of more than two years elapsed; but the cure was then complete, the patient using the limb equally as well as the other.—*Bulletin de l'Acadamie Royale de Medecine. Maryland Med. and Surg. Jour. Vol.* 1. *No.* 4.

THE WESTERN JOURNAL.

Vol. III.—No. V.

LOUISVILLE, MAY 1, 1841.

A CARD.

Dr. Drake takes this method of informing those who may wish to address him on the subject of the Journal, or may desire his professional advice, that he will reside in Cincinnati, until the opening of the next session of the Medical Institute of Louisville, on the first of November.

MEDICAL CONVENTION OF OHIO.

A domestic affliction in the month of March, caused us to forget the preparation, for the last number of the Journal, of a notice of the meeting of this Convention on the 12th inst. at Columbus. It will be the fourth held by the physicians of Ohio, and will, we hope, be more numerously attended than either of the others. D.

RESIGNATIONS, APPOINTMENTS AND DEATHS IN MEDICAL SCHOOLS.

Change is a characteristic feature of our Medical Schools. Very lately several professorships have been vacated and most of them filled by new incumbents.

Our elder sister of the West, Transylvania, has lost Professor Smith by resignation and return to Baltimore—his chair not yet filled, but an election expected to take place in June. The late Professor, it is said, will co-operate in the reorganization of the University of Maryland. The Jefferson Medical College has experienced still greater changes. In the month of February, she lost, by death, the amiable and respected Dr. Green, Professor of Chemistry, one of the original members of the Faculty. Subsequently Professors Pattison and Revere resigned the chairs of Anatomy and the Theory and Practice, and accepted appointments in the University of the *City* of New York. These events were followed by a kind of reorganization of the former institution, and the appointment of several gentlemen, who have not hitherto belonged to incorporated medical schools. Dr. Pancoast being transferred to Anatomy, Dr. Mutter was appointed Professor of the Institutes of Surgery, and Dr. Randolph of Operative Surgery; Dr. Huston was transferred from Obstetrics to Materia Medica, and Dr. Meigs elected his successor, Dr. Dunglison being placed in the chair of Institutes; Dr. Mitchell was chosen to that of Theory and Practice, and Dr. Bache that of Chemistry. The Pennsylvania College about the same time lost her Professor of Materia Medica, Dr. Calhoun, and his place has not been supplied. D.

PROFESSOR CALDWELL.

Our colleague, Professor Caldwell, embarked for Europe, at Boston, on the 3d of April, in the steam ship Caledonia. He has gone thither, not merely to commune with the distinguished men of England and France, but commissioned by our Board of Managers to make purchase of books and apparatus for the Institute. The Professor will return in the month of October, in time to enter upon his official duties, on the first Monday of November. Meanwhile, from his well known activity, we may hope for several letters from him, with which to enrich and enliven the pages of our Journal. D.

DEATH OF PRESIDENT HARRISON.

We have seen the official report of the physicians who attended the President of the United States in his last illness. The disease of which this venerable patriot died, was acute pneumonia, produced, as the gentlemen suppose, by his exposure to a shower, in a morning walk. We

rather think, that the oceanic March winds of his new locality, so unlike those to which he had been accustomed, on the dry and sunny slopes of the Ohio, were to blame for a part of the mischief. The respectable medical gentlemen who attended him, thought him too weak to bear the lancet, and therefore did not employ it—a decision which their brethren at a distance are not perhaps at liberty to question. No *post mortem* inspection was made.

The President always felt himself in sympathy with the Medical Profession, to which he was originally devoted, and in the study of which he was engaged at the time of his appointment in the army, in 1791. Thirty years afterwards, when a member of the Legislature of Ohio, he rendered important aid to the writer of this article, in obtaining a charter and endowment, for a public hospital in Cincinnati. D.

MEDICAL HOAX.

During the early part of last month, two or three of our younger Physicians made a few Galvanic experiments on a criminal recently hung in this city, by which some slight muscular contraction was excited, though not quite as much as usual in such cases.

On this state of fact a correspondent of one of our newspapers proceeded to construct a report which, as we have been told, for we did not read it, represented the criminal as raised to his feet and made to walk about the room, performing a variety of pantomimic gestures. We perceive by the newspapers, that this report has been regarded as authentic, and as it stated that another might be looked for in our Journal, we feel it a duty to make that which we have just penned.

We cannot but regret, that our newspaper press should so often give utterance to fabrications intended to deceive the public. What is a hoax but a falsehood! And what is there in the publication of a falsehood that can be approved! If our brethren of the political press cannot make their papers interesting to their readers, without imposing on them the creations of imagination as facts relating to passing eveuts, they would do well to abandon the profession for some calling in which the price of bread is not the sacrifice of veracity, or the practice of imposture. D.

GEOLOGICAL VOYAGE.

Dr. D. D. Owen, Geologist of Indiana, has fitted out a boat in Cincinnati, and commenced a voyage from that city to the mouth of the Ohio

river, for the collection of geological specimens. Starting from the oldest rock formation of the Ohio valley, and floating over the outcroppings, to the east, of many successive formations of limestone, shale and sandstone, the results of his exploration cannot fail to be interesting. He is desirous of the co-operation of all who live near the river or up its tributary streams; and we hope our readers in the region through which he passes, will make to him a liberal contribution of specimens,—noting in all cases, with accuracy, their localities; and when they send organic remains, crystallized salts, or ores, transmitting, also, specimens of the rocks in which they are found. Dr. Owen is one of your very best geologists, and deserves every kind of encouragement in his scientific enterprize. D.

RACIBORSKI'S ELEMENTS OF DIAGNOSIS.

We are happy to learn that a translation of this excellent work, decidedly the best on the subject in any language, will shortly appear from the pen of Mr. Hagan, a student of the Louisville Medical Institute. It will be comprised in an octavo volume of about 550 pages, and be published at an early period. From his intimate knowledge of the French language, and familiar acquaintance with the subject of the work, there is every reason to believe that Mr. Hagan will furnish a most excellent translation. S. D. G.

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